

**SITE ASSESSMENT REPORT FOR
IWI SITE
SUMMIT, COOK COUNTY, ILLINOIS**

EPA Region 5 Records Ctr.



366832

Prepared for

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Emergency and Remedial Response Branch Region V

77 West Jackson Street

Chicago, Illinois 60604

Prepared by

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|-------------------------------|----------------|
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14 August 2002

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Contract No.: 68-W-00-119
TDD No.: S05-0205-006
DCN: 263-2A-ABZL

Subject: IWI Site
Site Assessment Report, Revision 0

Dear Mr. Micke:

Weston Solutions, Inc. (WESTON®) (formerly Roy F. Weston, Inc.) is pleased to submit three copies of the Site Assessment Report, Revision 0, for the IWI Site in Summit, Cook County, Illinois.

Should you have any questions or require additional information, please feel free to contact the undersigned at (847) 918-4000.

Very truly yours,

WESTON SOLUTIONS, INC.

for Joseph Ruiz
START Associate Project Engineer

for Tonya Balla
START Project Manager

cc: Lorraine Kosik, START Project Officer, U.S. EPA, Region V(SE-5J)



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SECTION 1 INTRODUCTION

On 14 June 2002, United States Environmental Protection Agency (U.S. EPA) On-Scene Coordinator (OSC) Fredrick Micke and the Weston Solutions, Inc. (WESTON®) Superfund Technical Assessment and Response Team (START) initiated a site assessment at the IWI site located in Summit, Cook County, Illinois. The site assessment activities were conducted under Technical Document Directive (TDD) S05-0205-006. Sample analyses were conducted under analytical TDD S05-0206-011.

1.1 OBJECTIVES AND SCOPE OF SITE ASSESSMENT

The objective of this site assessment was to gather information to characterize the current state of the IWI site. Specific objectives of this site assessment were as follows:

- Determine if soil contamination is present on-site;
- Determine the nature of the contents of on-site drums and chemical totes;
- Determine the potential threats to human health and the environment;
- Evaluate the need for further site characterization, remediation, or removal.

To accomplish these objectives, the site assessment activities consisted of collecting soil, drum, and chemical tote samples from the site and selectively analyzing the samples for organic and inorganic parameters and characteristics of hazardous waste.

1.2 REPORT ORGANIZATION

This site assessment report is organized into the following sections.

- **Section 1-Introduction** - The Introduction provides a brief description of the objectives and scope of the site assessment activities.
- **Section 2-Site Background** - The Site Background section provides a site description, the site history, and a summary of previous investigations.
- **Section 3-Environmental Investigation Procedures** - This section describes the methods and procedures used during the site assessment activities.
- **Section 4-Environmental Investigation Results** -- The Environmental Investigation Results section describes the results of sample analysis.
- **Section 5-Threats to Human Health and the Environment** -- This section identifies conditions that warrant a removal action under the National Oil and Hazardous Substances Contingency Plan (NCP).
- **Section 6-Conclusions and Recommendations** - The findings of the site assessment activities are summarized and recommendations for further activities are provided.
- **Section 7-References** - A list of references utilized in compiling the report is provided.

SECTION 2

SITE BACKGROUND

2.1 SITE DESCRIPTION

The IWI site is located at 7738 West 61st Place in Summit, Cook County, Illinois. The geographic coordinates of the site are 41°46'47" north latitude and 87°48'51" west longitude. The approximately 1.7-acre, square-shaped site is bounded to the south by 61st Place and in all other directions by private property. A chain-link fence surrounds the site, with a hole in the fence along the northwest side of the property and a temporary fence at the south end of the property (Figure 2-1). There are three main buildings within the site's boundaries. The largest building is approximately 45,000 square feet and consists of five separate rooms and several floors. The stack building is approximately 5,000 square feet. The building known as building three, located between the stack building and the water tower, is approximately 1,000 square feet. Other key features on-site include dilapidated buildings, large debris piles, an old building foundation, above-ground storage tanks (ASTs), 55-gallon drums, and chemical totes.

The site is situated in a mixed area of both industrial and residential use. A residential neighborhood is located directly south of the site across 61st Place. A recreational-use water body is located within a 1/4 mile of the site, and the Chicago Sanitary and Ship Canal is located less than 3/4 mile to the west. The Des Plaines River is located approximately 1 mile west of the site (Figure 2-1).

2.2 SITE HISTORY

According to the Village of Summit Building Code Enforcement Officer, Mr. Jeffrey Duley, IWI, Inc., also known as Itasco, was owned and operated by Mr. Glenn Wellman. Operations at the site included chemical tote, drum, and pail reconditioning and processing. The original source(s) of the

on-site containers is unknown. According to Mr. Duley, operations ceased at the site in 1996, and Mr. Wellman has since passed away.

Mr. Duley noted the difference in elevation of the adjacent property to the west. Mr. Duley said that this elevation difference was a result of backfilling done by the adjacent property owner because runoff from the IWI Site was crossing the property boundary and leaving stains and odors in the adjacent parking lot.

According to records from the Illinois Environmental Protection Agency (IEPA), a fire occurred at the facility on 14 August 1985. The IEPA's emergency response unit responded to this fire and conducted sampling to determine if a hazard was present. A Freedom of Information Act (FOIA) request has been sent to IEPA to retrieve further information about the sampling done following the abovementioned fire.

In addition to the August 1985 fire, another fire occurred in May 2002. U.S. EPA responded to this fire, which consumed the two office buildings and severely damaged sections of the other buildings. The Village of Summit ordered the severely damaged office buildings to be demolished. M&R Wrecking, of McCook, Illinois, conducted the demolition activities. The debris from this demolition remains on-site.

SECTION 3

ENVIRONMENTAL INVESTIGATION PROCEDURES

On 24 and 25 June 2002, a START Investigation Team consisting of OSC Fredrick Micke (U.S. EPA) and START members Mr. Rick Mehl, Mr. Joseph Ruiz, and Mr. Greg Gehrig (WESTON) conducted a site assessment of the IWI property. The site assessment scheduled collecting samples to determine if hazardous materials were present on-site and to determine if those materials posed a significant threat to human health or the environment. Specific site assessment observations and activities are detailed below.

3.1 SITE CONDITIONS

At the time of this investigation, access to the site was unrestricted. The chain-link fence bordering the site to the north had a hole cut in it that was approximately 4 feet wide. The temporary fencing located on the southern border of the site adjacent to 61st Place is secured with wire ties and can be easily opened. There is evidence of trespassing including graffiti throughout the site. Furthermore, many of the site buildings were significantly damaged by the fire and were inaccessible because of severe roof or floor damage. Photographs of the site are provided in Appendix A, and site physical conditions are presented in Figure 3-1.

During the initial site reconnaissance a MultiRAE photoionization detector (PID) and a GM Pancake were used to determine if either organic or radiological contamination was present inside the site buildings. Both PID and radiological readings were zero.

The main building was determined to have an accessible second floor. Upon observing this second floor room, it was determined that the floor damage was sever enough to prevent full exploration of the second floor. Approximately 41 containers were noted on the second floor, including two fiberglass ASTs (15,000 gallons each), one 500-gallon AST, one 275-AST, and 27 55-gallon drums.

Also observed during the initial site reconnaissance was the large number of containers that were leaking, many containers had an oily substance near the top and sides of the container. The leaking containers of the most concern are located in the drum storage area. These drums are stacked precariously on top of each other, and the drums are in very poor condition. In addition, a stream of black oily liquid with a heavy sheen flows from the entryway to this area to the drainage ditch that is located along the western boundary of the site. Mr. Duley was told that the owner of the western adjacent property had to raise the elevation of his parking lot in order to prevent this runoff from staining his property.

Approximately 170 fifty-five-gallon drums were identified during the site assessment. Many of these drums were inaccessible because they were stacked or because they were unstable due to their deteriorated condition. Many of the drums were leaking or were improperly sealed. Drums located in the drum storage area south of room five were leaking and were draining into the drainage ditch to the west (Figures 3-1 and 3-6). Furthermore, chemical totes of varying capacity were also encountered on-site. The capacity of these totes varied from 345 to 600 gallons. The majority of the cylindrical or square totes, however, were 345-gallon steel totes.

In addition to the on-site drums and totes, several ASTs were also identified. The ASTs ranged in size from 275 to 20,000 gallons. A list of all containers observed, their approximate volume, their approximate location, and the amount of material contained in each is presented in Table 3-1.

In the stack building, a room containing a dried sludge floor was encountered (Figure 3-8). A loading chute extends into the room and was probably used for dumping sludge into the room.

In addition to containers, the site was littered with large amounts of debris. The debris piles contained demolition debris from the demolition of the two buildings following the May 2002 fire. Approximately 1,000 square feet (ft²) of 3/8-inch transite panels were located in one of the debris piles. These panels were severely damaged and friable. During the initial site walk on 14 June 2002,

there was on-site ponding; a bright-green tint was noted in the water. On-site sumps are detailed in Table 3-2, and other environmental concerns noted during the site assessment are detailed in Table 3-3.

3.2 SAMPLING ACTIVITIES

Twelve samples from drums and chemical totes were collected utilizing Level B personal protective equipment (PPE). Many of the drums and totes were located in areas with significant structural damage or were stacked in a precarious manner. The drums and totes selected for sampling were chosen based on accessibility. Soil sample collection locations are shown in the room detail figures (Figures 3-5 through 3-10). Sample collection procedures are described below.

A total of three investigative surface soil samples were collected. These soil samples were collected utilizing Level D PPE. A physical description of conditions at each sample location follows:

- **IWI-13** - This sample was collected from the drainage ditch in the area where significant staining from the drum storage area was observed.
- **IWI-14** - This sample was collected from the drainage ditch directly north of sample IWI-13. The drainage ditch appeared to have a flow direction of north to south.
- **IWI-15** - This sample was collected in the area located east of the railroad car AST. Staining was observed in the area, and a strong odor was noted.

Soil samples were collected with disposable plastic scoops. A grab sample was first collected for volatile organic compound (VOC) analysis and was packed in Encore samplers. The remainder of the sample was packed in a 32-ounce, clear, wide-mouth, glass jar with a Teflon-lined lid. Nitrile gloves were worn during sample collection and were changed before each subsequent sample was taken. Soil samples were collected from approximately 0 to 3 inches below ground surface (bgs).

Container samples were collected either with drum thieves or with disposable plastic scoops and were placed into clear, wide-mouth, glass jars with Teflon-lined lids. The method of collection depended on the consistency and viscosity of the material in the container. When container contents were mainly liquid, VOC samples were collected in separate vials pre-preserved with hydrochloric acid (HCl). Figures 3-2 through 3-8 show the details of individual rooms within the site buildings as well as container sample locations.

All soil samples were analyzed for Target Analyte List (TAL) metals, VOCs, semivolatile organic compounds (SVOCs), pesticides, polychlorinated biphenyl compounds (PCBs), Toxic Characteristic Leaching Procedure (TCLP) organic compounds (VOCs, SVOCs, and pesticides), and TCLP metals. All container samples were analyzed for TAL metals, TCLP organic compounds (VOCs and SVOCs), TCLP metals, PCBs, reactive cyanide, reactive sulfide, pH, and flashpoint, and a paint filter analysis was also conducted. In addition, container samples IWI-1, IWI-2, and IWI-3 were also analyzed for VOCs, because the contents of these containers were mainly liquid.

All samples were labeled and preserved in coolers with ice immediately after sample collection. At the end of the sampling period, samples were packed, transported, and relinquished under chain of custody to PDP Analytical Services, in The Woodlands, Texas, for analysis.

Spent personal protective equipment (PPE) and contaminated debris generated during the sampling event were containerized in plastic bags, labeled, and stored on-site.

SECTION 4

ENVIRONMENTAL INVESTIGATION RESULTS

Three investigative soil samples were collected during this investigation and were shipped to PDP Analytical Services, in The Woodlands, Texas. Twelve investigative container samples were collected from drums and chemical totes and were delivered to the same laboratory. Analytical parameter selections for each sample are outlined in Section 3.2. Analytical results for these analyses were compared to regulatory criteria levels. Results of the comparison are presented in Tables 4-1 through 4-8. Three sets of criteria were used for the comparison:

- U.S. EPA Region IX Preliminary Remediation Goals (PRGs) for industrial areas;
- Illinois Administrative Code (IAC) Title 35, Part 742 *Tiered Approach to Corrective Action Objectives* (TACO) Tier 1 Soil Remediation Objectives for Industrial/Commercial Properties;
- 40 Code of Federal Regulations (CFR) Part 261, characteristics of hazardous waste.

4.1 SOIL SAMPLING

4.1.1 Soil Analysis for Hazardous Waste Characteristics

4.1.1.1 TCLP Metals in Soil

Three surface soil samples were analyzed for TCLP metals from locations IWI-13 through IWI-15. As indicated in Table 4-1, concentrations of TCLP lead exceeded the criteria for toxicity in sample IWI-14. At location IWI-14, TCLP lead was detected at 12.7 milligrams per liter (mg/L). The regulatory level, as specified in 40 CFR, Chapter 1, 261.24 is 5.0 mg/L for lead.

4.1.1.2 TCLP VOCs in Soil

Three surface soil samples were analyzed for TCLP VOCs from locations IWI-13 through IWI-15. None of the results were detected above the method detection limits.

4.1.1.3 TCLP SVOCs in Soil

Three surface soil samples were analyzed for TCLP SVOCs from locations IWI-13 through IWI-15. None of the results were above the method detection limits.

4.1.2 TAL Metals in Soil

Three surface soil samples were analyzed for TAL metals (IWI-13, IWI-14, and IWI-15). All samples submitted had concentrations of lead above the industrial criteria level of 1079 milligrams per kilogram (mg/kg) (Table 4-2). Lead concentrations in the samples ranged from 1,850 mg/kg to 4,240 mg/kg. In addition, the chromium concentration in sample IWI-13 exceeded the industrial criteria (420 mg/kg) at a concentration of 820 mg/kg. No other TAL metals concentrations were greater than the criteria levels in these soil samples.

4.1.3 PCBs and Pesticides in Soil

Three surface soil samples were analyzed for PCBs and pesticides (IWI-13, IWI-14, and IWI-15). No pesticide or PCB compounds were detected above the method detection limits in these samples.

4.1.4 VOCs in Soil

Three surface soil samples were analyzed for VOC analysis (IWI-13, IWI-14, and IWI-15). The results from the VOC analysis are presented in Table 4-3. Results indicate that no VOCs were

detected above the criteria levels and only 11 VOCs were measured at concentrations at or above the method detection limits.

4.1.5 SVOCs in Soil

Three surface soil samples (IWI-13, IWI-14, and IWI-15) were analyzed for SVOCs. Bis(2-ethylhexyl)phthalate was the only SVOC detected above the method detection limits, and its concentrations exceeded criteria levels in each of the samples tested (Table 4-3). Concentrations of bis(2-ethylhexyl)phthalate ranged from 420,000 ug/kg to 1,500,000 ug/kg. The Region IX criteria for bis(2-ethylhexyl)phthalate is 180,000 ug/kg. Bis(2-ethylhexyl)phthalate is not listed in the TACO Tier I Soil Remediation Objectives for Industrial/Commercial properties. No other SVOCs exceeded criteria levels in any of these samples.

4.2 CONTAINER SAMPLING

4.2.1 Container Sample Analysis for Hazardous Waste Characteristics

4.2.1.1 TCLP Metals in Container Sample

TCLP metals analysis was performed on the 12 container samples (IWI-1 through IWI-12). As indicated in Table 4-4, both chromium and lead concentrations exceeded the criteria for toxicity, which is 5.0 mg/L for both chromium and lead. Chromium exceeded the regulatory level in IWI-1 at a concentration of 42.4 mg/L. Lead exceeded the regulatory level in IWI-4 and IWI-7 at concentrations of 7.18 and 281 mg/L, respectively. None of the other compounds in the TCLP metals analysis exceeded the regulatory level for toxicity.

4.2.1.2 TCLP VOCs in Container Sample

Three container samples were analyzed for TCLP VOCs. Results from the analysis of TCLP VOCs on container samples IWI-1, IWI-2, and IWI-3 are presented in Table 4-5. No VOCs were detected at concentrations greater than the regulatory level for toxicity. Two compounds were detected above their method detection limits: 2-butanone, at concentrations of 3,700 and 1,500 ug/L in IWI-1 and IWI-11, respectively; and tetrachloroethene at a concentration of 210 ug/L in IWI-3.

4.2.1.3 TCLP SVOCs in Container Sample

Twelve container samples, IWI-1 through IWI-12, were analyzed for TCLP SVOCs. No SVOCs were detected at concentrations greater than the method detection limit.

4.2.1.4 Other Hazardous Waste Characteristics in Container Sample

Analyses for other hazardous waste characteristics were performed on the material collected from the 12 containers (IWI-1 through IWI-12). The results are presented in Table 4-6. The results indicate that the material contained in all of the containers, except IWI-9, exhibits the characteristic of a hazardous waste due to ignitability. The material in all of the containers except IWI-9 had a flashpoint below the regulatory level of 140 degrees Fahrenheit (°F).

The other analysis performed to determine if the container samples exhibit the characteristics of a hazardous waste were: cyanide reactivity, sulfide reactivity, pH, and paint filter test. All of the container samples had levels that were within the regulatory limits for cyanide reactivity, sulfide reactivity, and pH. In addition, container samples IWI-1, IWI-2, IWI-3, and IWI-6 failed the paint filter test, which indicates that they contained free liquid.

4.2.2 Container Sample Analysis for TAL Metals

Twelve container samples were collected and submitted for TAL metals analysis (IWI-1 through IWI-12). The results are presented in Table 4-7. Three compounds exceeded the criteria level in five samples. Antimony was detected at an elevated level in sample IWI-4 at a concentration of 2,200 mg/kg. Chromium was detected at elevated levels in samples IWI-1 and IWI-5 at concentrations of 14,000 and 500 mg/kg, respectively. Lead was detected at elevated levels in IWI-4, IWI-5, IWI-7, and IWI-8 with concentrations ranging from 1,770 to 15,900 mg/kg. No other TAL metals were found at significant elevated levels in the container samples.

4.2.3 Container Sample Analysis for PCBs

Twelve container samples were analyzed for PCBs (IWI-1 through IWI-12). No PCB compounds were detected above the method detection limits in these samples.

4.2.4 Container Sample Analysis for VOCs

Three container samples were analyzed for VOCs (IWI-1, IWI-2, and IWI-3). The results from the VOC analysis are presented in Table 4-8. Results indicate that 11 different VOCs were detected at elevated levels. IWI-1 had elevated levels of 1,3,5-Trimethylbenzene (21,000 mg/kg), n-propylbenzene (11,000 mg/kg), and naphthalene (4,600 mg/kg). IWI-2 did not have any compounds detected at elevated levels. IWI-3 had elevated levels of m&p-xylene (1,600 mg/kg) and toluene (400 mg/kg).

SECTION 5

THREATS TO HUMAN HEALTH AND THE ENVIRONMENT

Conditions present on the IWI site warranting an appropriate removal action as set forth in paragraph (b)(2) of 40 CFR Part 300.415 of the NCP include the following:

- **Actual or potential exposure to nearby human populations, animals, or the food chain from hazardous substances or pollutants or contaminants.**

Analytical results indicate that surface soil has been impacted by elevated concentrations of lead and chromium. Total lead concentrations on-site were detected up to a maximum concentration of 4,240 mg/kg and exceeded the U.S. EPA Region IX PRGs for industrial soil (750 mg/kg) in all of the soil samples. In one of these samples, chromium exceeded the U.S. EPA Region IX PRGs and was detected at a concentration of 820 mg/kg. In addition, TCLP lead (12.7 mg/L at location IWI-14) in site soils exceeded the criteria for toxicity. The contents of multiple on-site containers were found to have flashpoints below the minimum temperature level (140 °F) which indicates that the material exhibits the characteristics of a hazardous waste for ignitability as outlined in 40 CFR, Chapter 1, Section 261. Because access to the site is unrestricted and because human activity is apparent at the site, the presence of high lead and chromium levels in site soils as well as the presence of hazardous wastes in the on-site containers increases the likelihood that the site poses a significant threat to human health and the environment.

- **Weather conditions that may cause hazardous substances or pollutants or contaminants to migrate or be released.**

Chromium and lead concentrations in site soils significantly exceeded criteria levels; samples containing the highest concentrations were from the drainage channel. This drainage channel is suspected to conduct surface water off-site, possibly transporting contamination off-site into streets and drainage systems. In addition, nearby residences may also be affected by the transport of lead

in soil particles that have been eroded and transported by high winds. These conditions may have caused hazardous substances or pollutants to migrate off-site or to be released. A clear path of waste migration was observed draining west from the drum storage area to the drainage ditch on the western side of the property.

- **Threat of fire or explosion.**

Drums, chemical totes, and ASTs were observed on the IWI site. The locations and conditions of these containers varied substantially. A majority of the drums were severely damaged and degraded as they were leaking, rusting, and bulging. Most of the chemical totes appeared to be in suitable shape, but some have deteriorated. The contents of these containers are mostly unknown though many containers appeared to be empty. The possibility of fire or explosion exists if the material inside a container is highly flammable. The contents of 11 of the 12 containers sampled were found to have flashpoints below 140 °F, which exceeds the regulatory limits used to define a hazardous waste for ignitability. The flammability of the material inside the containers coupled with the possibility of a spark being generated from collapsing drums or structures presents a threat of fire or explosion. Two fires have already occurred at the site in August 1985 and in May 2002.

- **Hazardous substances or pollutants or contaminants in drums, barrels, tanks, or other bulk storage containers that may pose a threat of release.**

Drums, chemical totes, and ASTs were observed on the IWI site. These containers as well as buildings in which these containers are stored have deteriorated substantially as many of the containers are bulging, rusting, or leaking. Eleven of the containers sampled for hazardous waste characteristics had properties that exceeded the criteria levels outlined in 40 CFR, Chapter 1, 261.21 and 261.23. In addition, many of the container samples had elevated concentrations of metals (antimony, chromium, and lead) and TCLP metals (chromium and lead). The condition of these containers coupled with the structural instability of the on-site buildings poses a significant threat of a release.

SECTION 6

CONCLUSIONS AND RECOMMENDATIONS

6.1 CONCLUSION

The IWI site is located at 7738 West 61st Place in Summit, Cook County, Illinois. Land use for the surrounding properties includes both industrial and residential land use. Recreational-use water bodies are within 1/4 mile of the site boundary. A residential neighborhood is located directly south of the site across 61st Place. The Chicago Sanitary and Ship Canal is located less than 3/4 mile west, and the Des Plaines River is located 1 mile west of the site. Most of the site is enclosed by a fence; however, access appears to be unrestricted as START noted numerous fence breaks and evidence of trespassing.

On 24 and 25 June 2002, START conducted a site assessment and discovered large amounts of debris; numerous dilapidated drums, chemical totes, and ASTs; and several severely dilapidated buildings. Three investigative soil samples and 12 container samples were collected and analyzed for a variety of potential contaminants.

Soil sampling results for metals analyses indicated levels of lead and chromium in site soils above U.S. EPA Region IX PRG regulatory levels. Based on the results of TCLP analysis of site soils and according to 40 CFR Chapter 1 - 261.24, hazardous levels of lead were detected in site soils.

Materials from 11 of the 12 containers sampled were classified as hazardous waste based on the materials' flashpoints, which were below 140 °F. Materials exhibiting flashpoints below 140 °F exhibits criteria of a hazardous waste for ignitability. In addition, some of the material sampled had elevated concentrations of TCLP metals, TAL metals, and VOCs.

Based on the site assessment, contaminated soil and material stored in the containers at the IWI site poses a significant threat to human health as defined under 40 CFR §300.415(b)(2)(i)-(viii)

1. Actual or potential exposure to nearby human populations, animals, or the food chain from hazardous substances or pollutants or contaminants exists on-site.
2. Weather conditions may cause hazardous substances or pollutants or contaminants to migrate or be released.
3. The threat of fire or explosion exists on-site.
4. Hazardous substances or pollutants or contaminants in drums, barrels, tanks, or other bulk storage containers, may pose a threat of release.

6.2 RECOMMENDATIONS

Based on the conclusions drawn from the information gathered during the site assessment and the analytical results, START recommends the following:

- The on-site containers should be further characterized.
- Containers that are determined to contain a hazardous waste should be removed and disposed of at a licensed hazardous waste disposal facility.
- An extent of contamination investigation of site soils should be conducted to determine the volume of soil exceeding cleanup objectives.

SECTION 7

REFERENCES

40 CFR Part 261, Identification and listing of hazardous waste, 1990.

Illinois Environmental Protection Agency. Freedom of Information Act Inquiry Response. Bureau of Air. 10 July 2002

Illinois Environmental Protection Agency. Freedom of Information Act Inquiry Response. Bureau of Water. 11 July 2002

Illinois Environmental Protection Agency. Freedom of Information Act Inquiry Response. Office of Emergency Response. 18 July 2002

Illinois Administrative Code (IAC). 1997. Title 35 IAC, Part 742. *Tiered Approach to Corrective Action Objectives*. Effective 1 July 1997.

United States Environmental Protection Agency (U.S. EPA), Region IX Preliminary Remediation Goals, 2000.

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10.16

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10.18

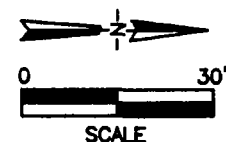
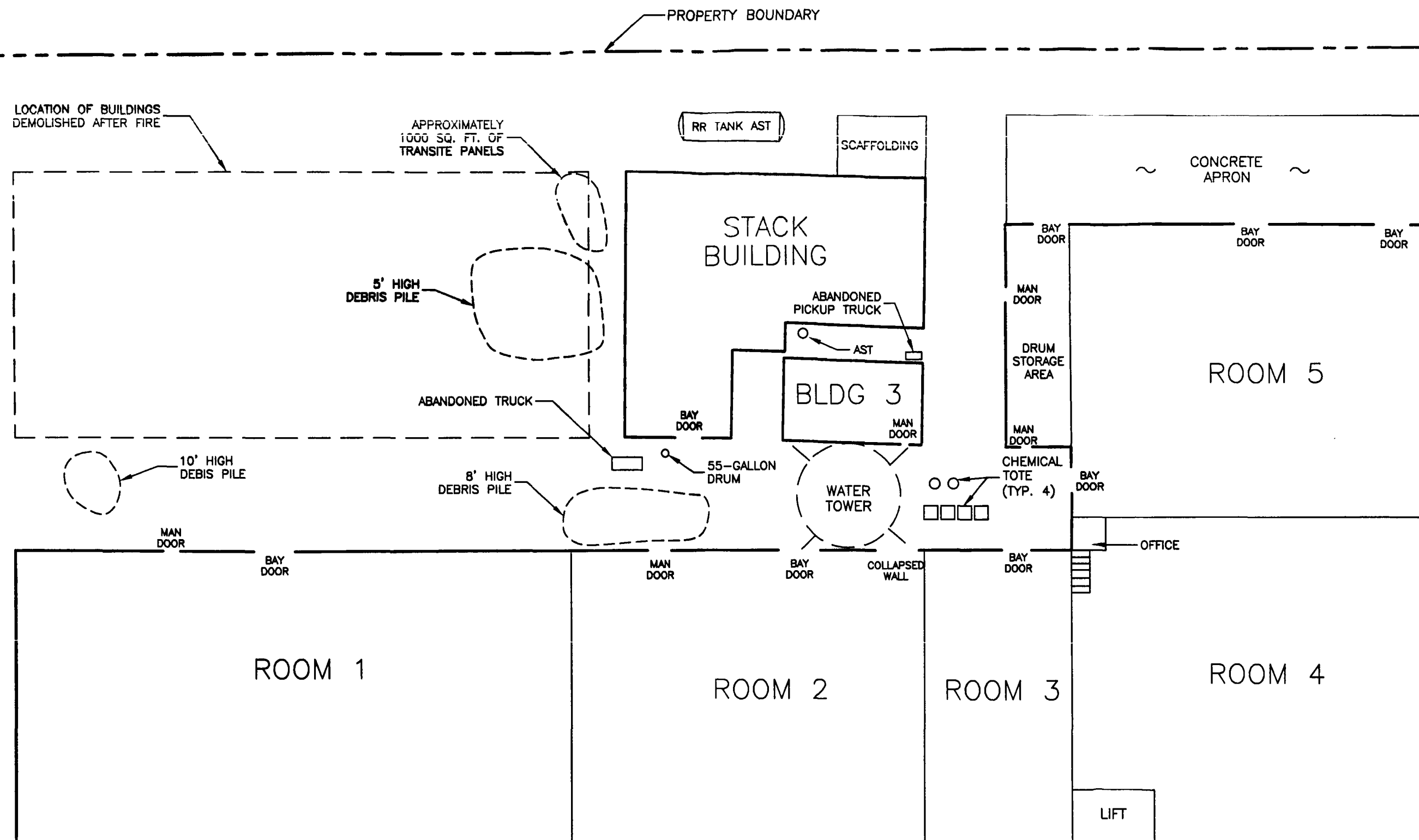
10.19

10.20

FIGURES

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61ST PL



SUPERFUND TECHNICAL ASSESSMENT AND RESPONSE TEAM
U.S. EPA CONTRACT No. 68-W-00-119
WORK ASSIGNMENT No. 0205-006
DOCUMENT CONTROL No. RFW263-2A-ABYJ

DETAILED SITE MAP
IWI SITE
Summit, Illinois

FIGURE 3-1

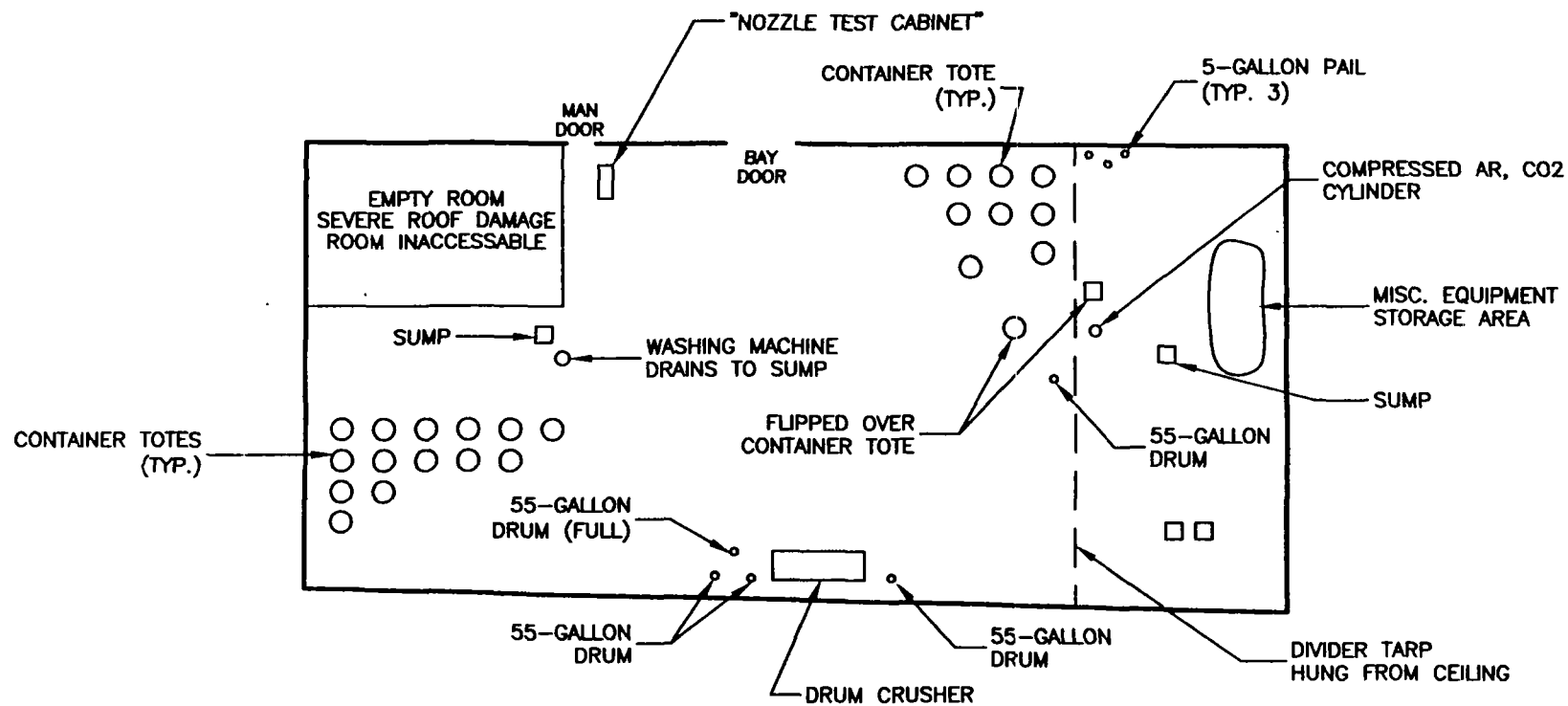


FIGURE 3-2

SUPERFUND TECHNICAL ASSESSMENT AND RESPONSE TEAM
U.S. EPA CONTRACT No. 68-W-00-119
WORK ASSIGNMENT No. 0205-006
DOCUMENT CONTROL No. RFW263-2A-ABYJ

ROOM 1 DETAIL
IWI SITE
Summit, Illinois

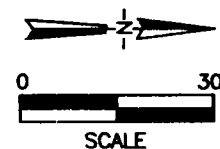
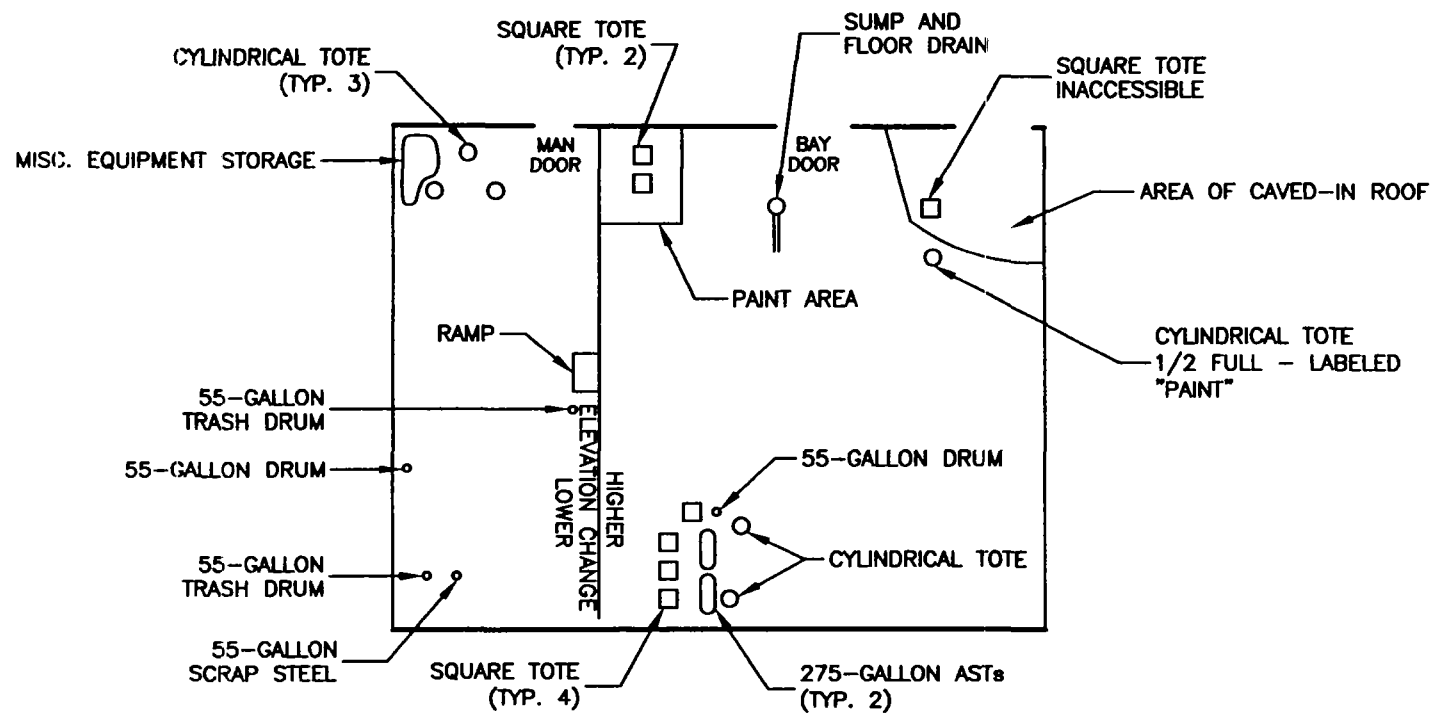


FIGURE 3-3

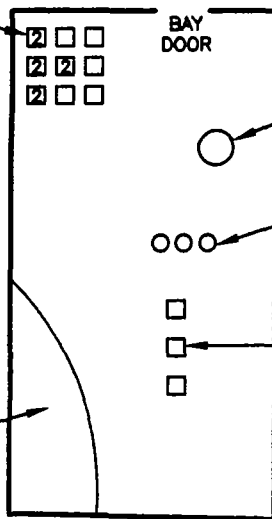
SUPERFUND TECHNICAL ASSESSMENT AND RESPONSE TEAM
 U.S. EPA CONTRACT No. 68-W-00-119
 WORK ASSIGNMENT No. 0205-006
 DOCUMENT CONTROL No. RFW263-2A-ABYJ

ROOM 2 DETAIL

IWI SITE

Summit, Illinois

SQUARE TOTE
STACKED 2-HIGH
(TYP.)



UNKNOWN TANK
(EXTENDS TO 2ND FLOOR)

CYLINDRICAL TOTES
(TYP.)

SQUARE TOTES
(TYP.)

AREA WITH NO
ROOF DAMAGE

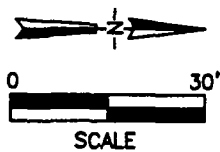


FIGURE 3-4

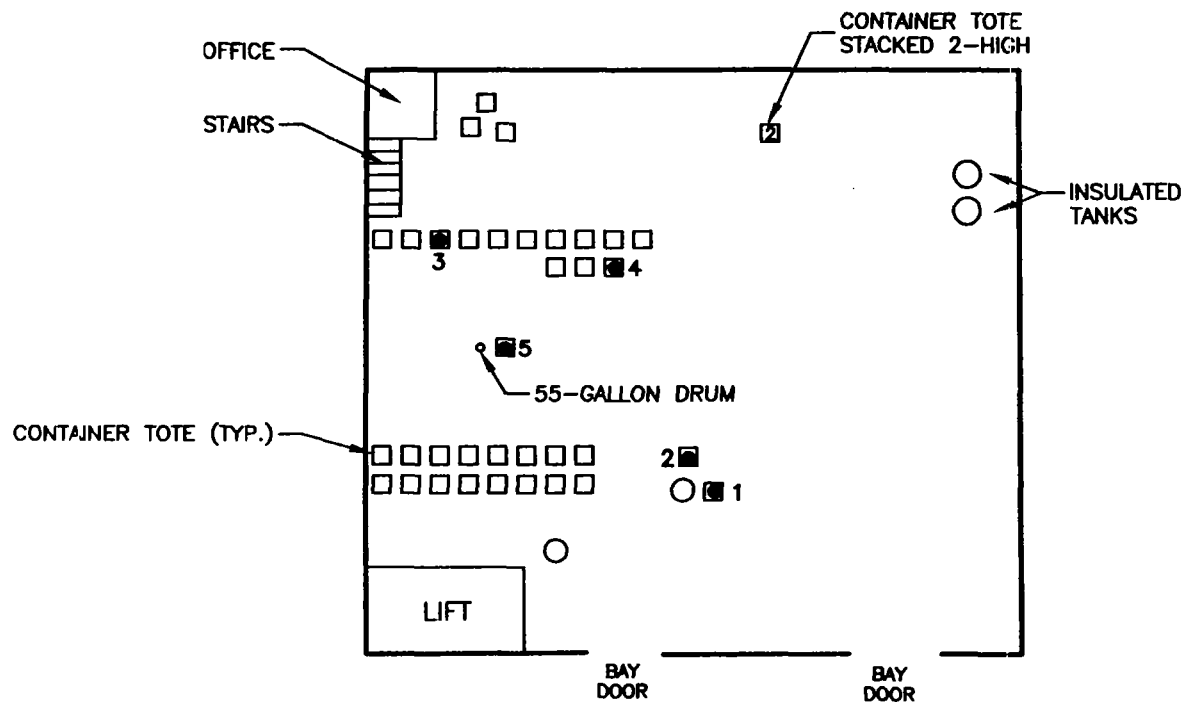
SUPERFUND TECHNICAL ASSESSMENT AND RESPONSE TEAM
U.S. EPA CONTRACT No. 68-W-00-119
WORK ASSIGNMENT No. 0205-006
DOCUMENT CONTROL No. RFW263-2A-ABYJ

ROOM 3 DETAIL

IWI SITE

Summit, Illinois

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LEGEND

2 • CONTAINER SAMPLE LOCATION

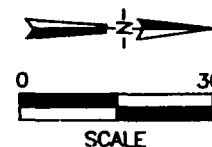
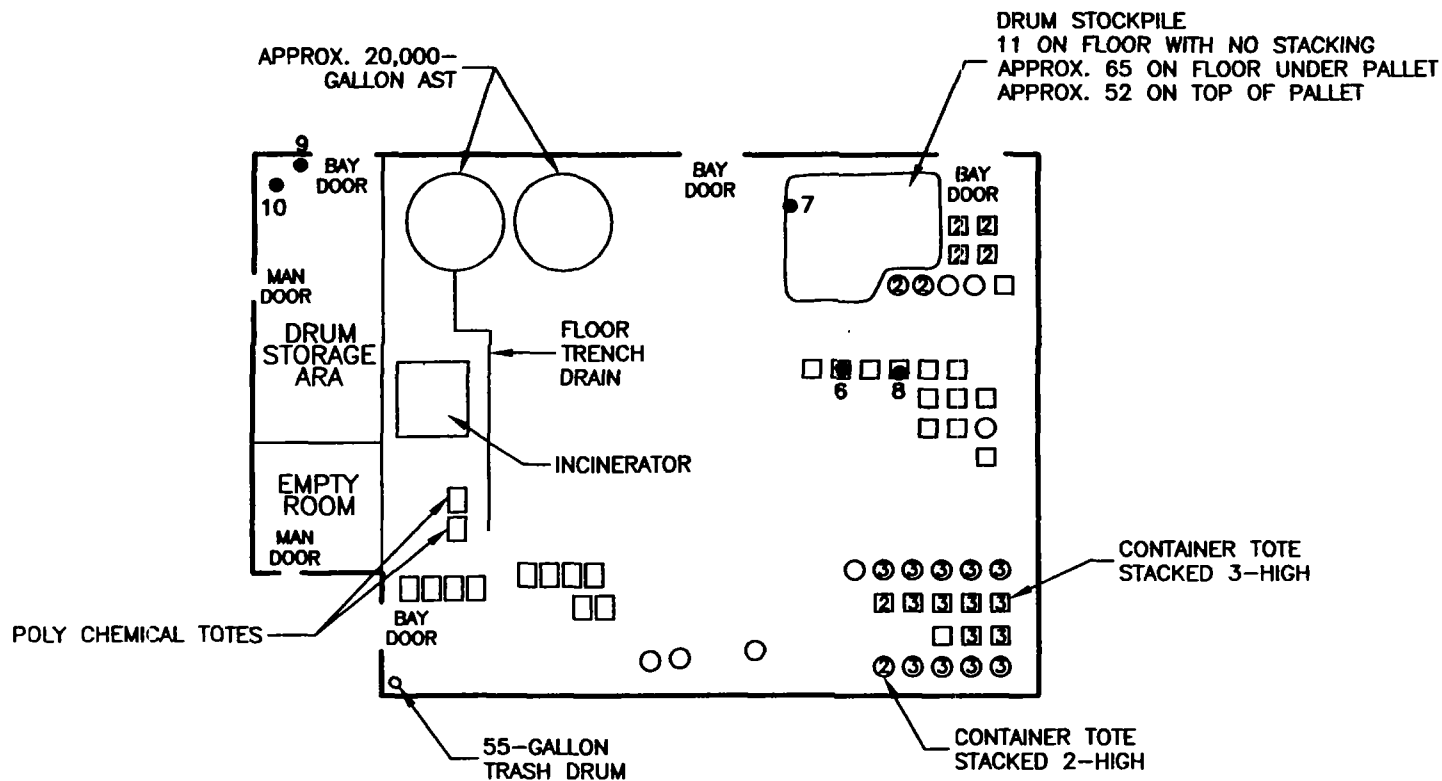


FIGURE 3-5

SUPERFUND TECHNICAL ASSESSMENT AND RESPONSE TEAM
 U.S. EPA CONTRACT No. 68-W-00-119
 WORK ASSIGNMENT No. 0205-006
 DOCUMENT CONTROL No. RFW263-2A-ABYJ

ROOM 4 DETAIL
 IWI SITE
 Summit, Illinois



LEGEND

6 ● CONTAINER SAMPLE LOCATION

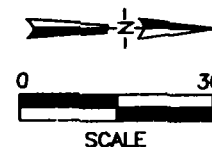


FIGURE 3-6

SUPERFUND TECHNICAL ASSESSMENT AND RESPONSE TEAM
U.S. EPA CONTRACT No. 68-W-00-119
WORK ASSIGNMENT No. 0205-006
DOCUMENT CONTROL No. RFW263-2A-ABYJ

ROOM 5 DETAIL
IWI SITE
Summit, Illinois

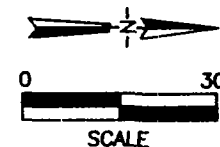
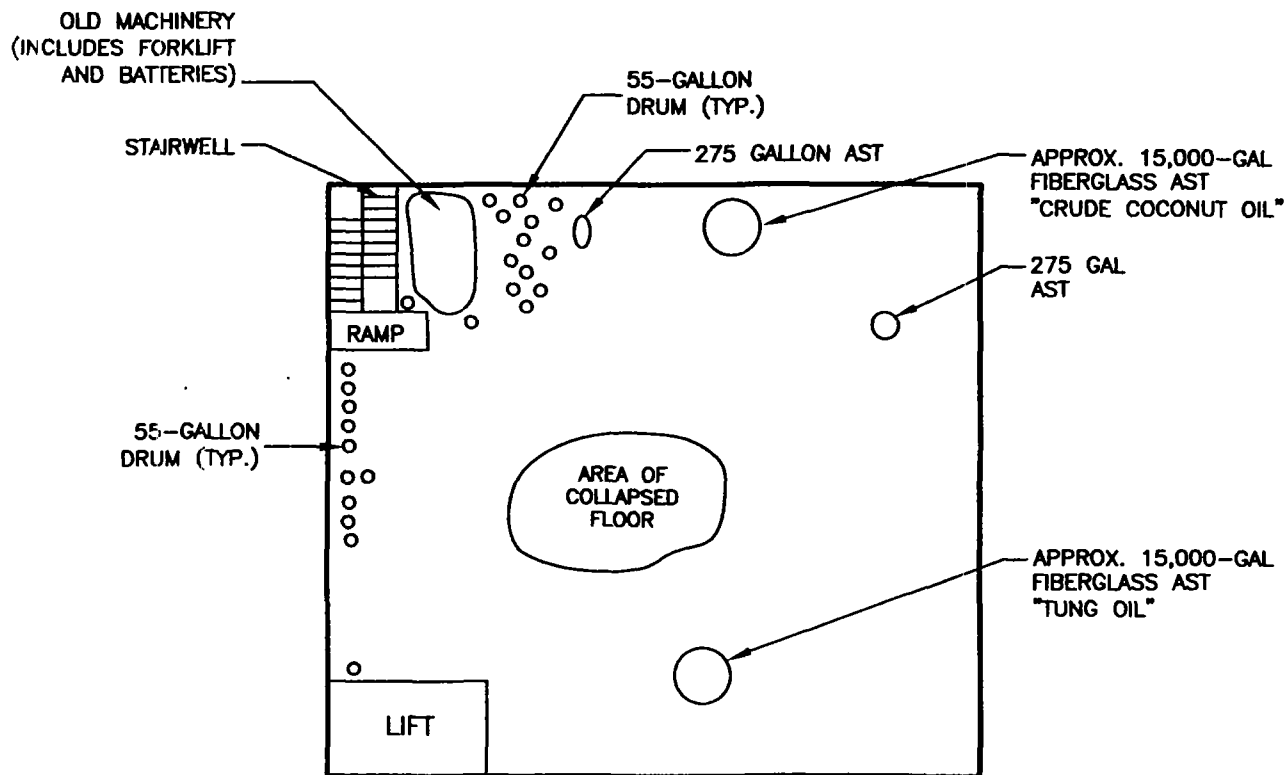
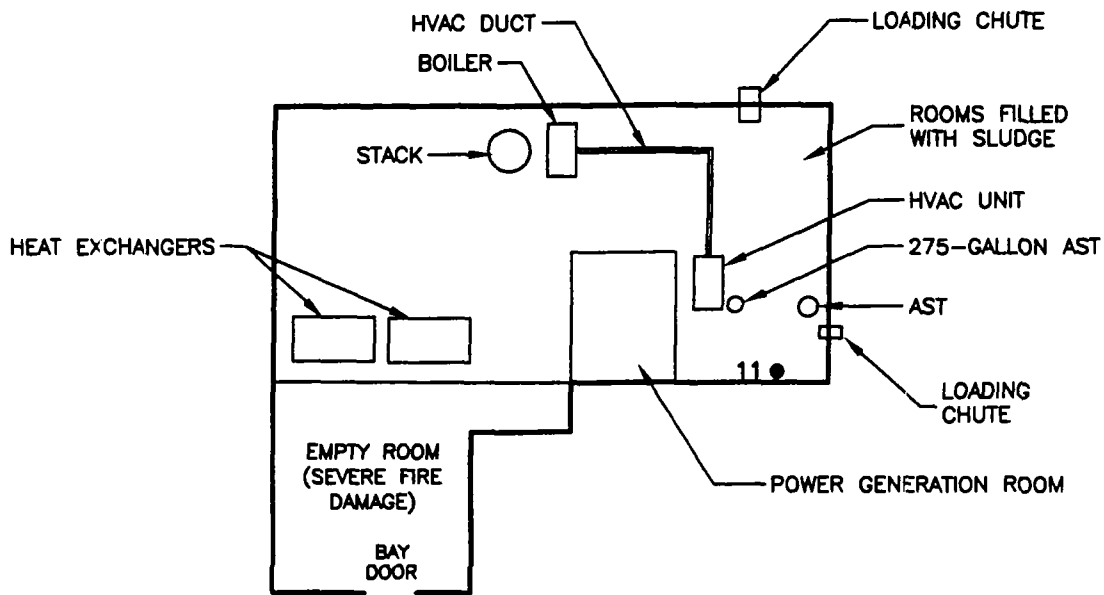


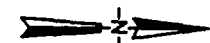
FIGURE 3-7

| | |
|---|--|
| <p>SUPERFUND TECHNICAL ASSESSMENT AND RESPONSE TEAM U.S. EPA CONTRACT No. 68-W-00-119 WORK ASSIGNMENT No. 0205-006 DOCUMENT CONTROL No. RFW263-2A-ABYJ</p> | <p>UPSTAIRS DETAIL IWI SITE Summit, Illinois</p> |
|---|--|



LEGEND

11 ● SAMPLE LOCATION



0 30'
SCALE

FIGURE 3-8

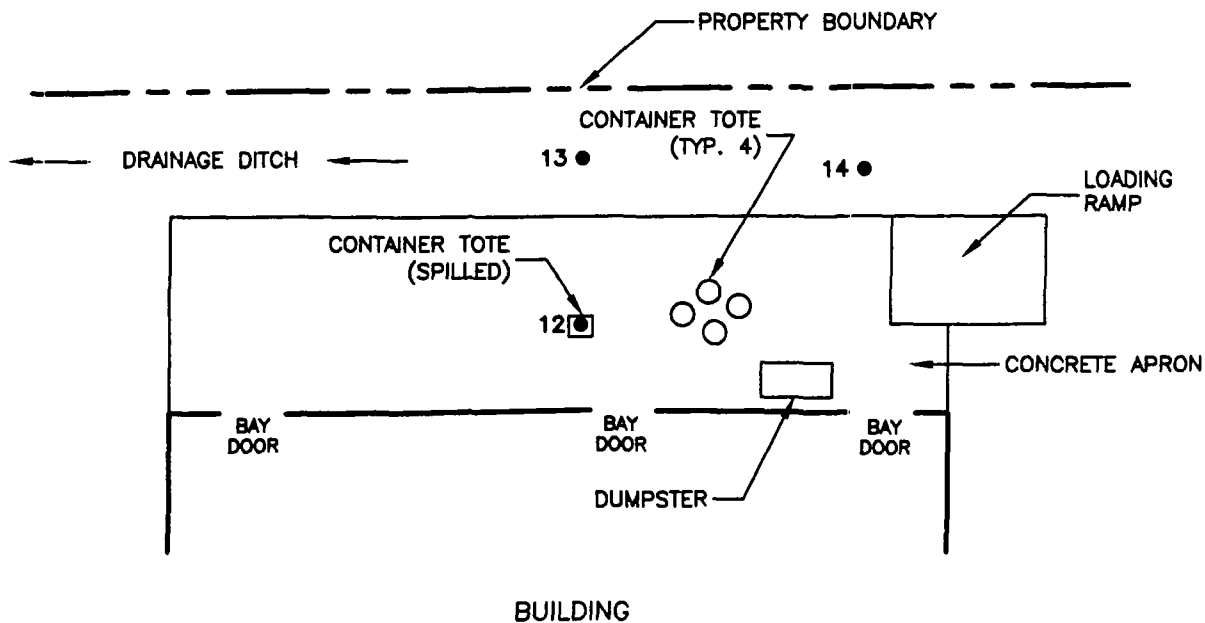
SUPERFUND TECHNICAL ASSESSMENT AND RESPONSE TEAM

U.S. EPA CONTRACT No. 68-W-00-119
WORK ASSIGNMENT No. 0205-006
DOCUMENT CONTROL No. RFW263-2A-ABYJ

STACK BUILDING DETAIL

IWI SITE

Summit, Illinois



LEGEND

- 12 ● CONTAINER SAMPLE LOCATION
- 13 ⊙ SOIL SAMPLE LOCATION

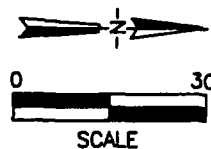


FIGURE 3-9

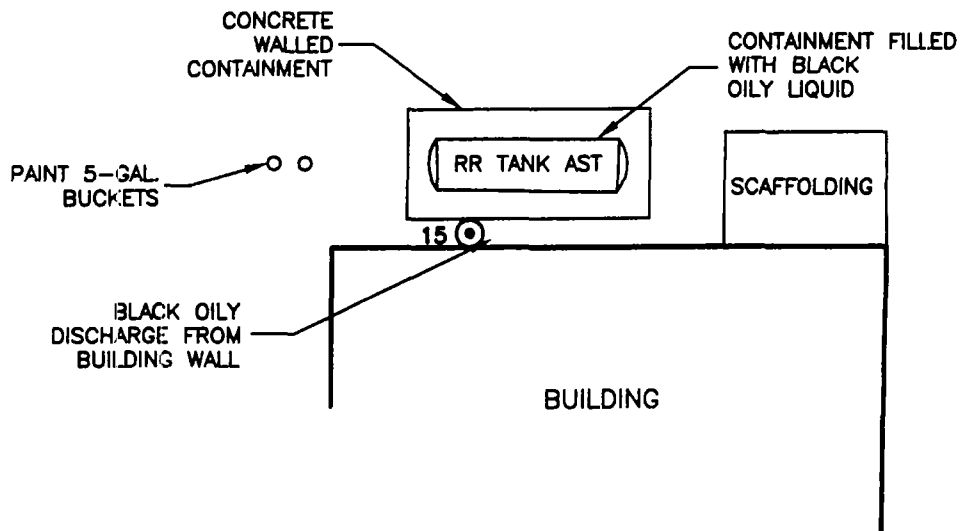
SUPERFUND TECHNICAL ASSESSMENT AND RESPONSE TEAM

U.S. EPA CONTRACT No. 68-W-00-119
 WORK ASSIGNMENT No. 0205-006
 DOCUMENT CONTROL No. RFW263-2A-ABYJ

AREA WEST OF ROOM 5 DETAIL

IWI SITE

Summit, Illinois



LEGEND

15 SOIL SAMPLE LOCATION

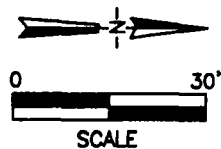


FIGURE 3-10

SUPERFUND TECHNICAL ASSESSMENT AND RESPONSE TEAM

U.S. EPA CONTRACT No. 68-W-00-119
 WORK ASSIGNMENT No. 0205-006
 DOCUMENT CONTROL No. RFW263-2A-ABYJ

AREA WEST OF STACK BUILDING

IWI SITE

Summit, Illinois

TABLES

Table 3 - 1

Container Inventory
IWI Site, Summit, IL

| Location | Type of Container | Approximate Volume (Gallons) | % Full | Number | Tank Material | Suspected Contents | Comments |
|----------------------------|----------------------------|------------------------------|---------|---------|-----------------|--|---|
| Building 3 | 55-Gallon Drum | 55 | Unknown | 5 | Steel | A few of the drums are open and overflowing with debris, including metal shavings. | Unable to access the drums because of the severe structural damage to this room's roof, which has almost completely fallen. |
| Building 3 | 55-Gallon Drum | 55 | Unknown | 1 | Poly | Unknown | Unable to access the drums because of the severe structural damage to this room's roof, which has almost completely fallen. |
| Concrete Apron Area | 55-Gallon Drum | 55 | 100 | 2 | Poly | One drum is suspected to contain water, the other drum's contents are unknown. | Drums located in the western drainage ditch. |
| Concrete Apron Area | Cylindrical Chemical Totes | 500 | 50 | 4 | Steel | Petroleum based products and sludge and other contents that could not be determined. | |
| Concrete Apron Area | Dumpster | 1000 | 100 | 1 | Steel | Soil and debris. | |
| Concrete Apron Area | Square Chemical Totes | 345 | 75 | 1 | Fiberglass | Rubber-like substance, tan in color, stiff but stretchy. | Container has been flipped over and contents have spilled onto the concrete and dried in place. One analytical sample of these contents was collected. |
| Courtyard Near Water Tower | 55-Gallon Drum | 55 | 100 | 1 | Steel | Unknown | |
| Courtyard Near Water Tower | Cylindrical Chemical Totes | 345 | 0 | 1 | Steel | NA | |
| Drum Storage Area | 55-Gallon Drum | 55 | Unknown | Unknown | Steel | Paint waste and petroleum products. | Room was determined to be large enough to hold up to approximately 700 drums. Because the drums are damaged, rusted, and stacked up to 3 high, unable to determine exactly how many drums are in this room. |
| Outside Stack Building | Aboveground Storage Tank | 1500 | Unknown | 1 | Steel | Unknown | |
| Outside Stack Building | Aboveground Storage Tank | 20000 | Unknown | 1 | Steel | Petroleum products. | Railroad car AST surrounded by a 18" high concrete wall. |
| Outside Stack Building | Aboveground Storage Tank | 1000 | Unknown | 1 | Insulated Steel | Suspected hot water tank. | Fiberglass jacket on the tank, located outside of sludge room. |
| Power Generation Room | 55-Gallon Drum | 55 | 100 | 1 | Steel | Debris | |
| Room 1 | 55-Gallon Drum | 55 | 0 | 2 | Steel | Unknown | |
| Room 1 | 55-Gallon Drum | 55 | 50 | 1 | Steel | Unknown | |
| Room 1 | 55-Gallon Drum | 55 | 50 | 2 | Steel | Debris | |

Table 3 - 1

Container Inventory
IWI Site, Summit, IL

| Location | Type of Container | Approximate Volume (Gallons) | % Full | Number | Tank Material | Suspected Contents | Comments |
|----------------|----------------------------|------------------------------|---------|--------|---------------|--|--|
| Room 1 | Cylindrical Chemical Totes | 345 | 0 | 21 | Steel | Unknown | |
| Room 1 | Cylindrical Chemical Totes | 345 | 40 | 2 | Steel | Labeled NaOH | |
| Room 1 | Pails | 5 | 100 | 2 | Plastic | Solids | |
| Room 1 | Square Chemical Totes | 345 | 0 | 5 | Steel | Unknown | Two have the tops cut off. |
| Room 1 | Square Chemical Totes | 345 | 40 | 1 | Steel | Unknown | |
| Room 2 | 55-Gallon Drum | 55 | 50 | 5 | Steel | Debris | Used as trash cans |
| Room 2 | Aboveground Storage Tank | 275 | 0 | 2 | Steel | Unknown | |
| Room 2 | Cylindrical Chemical Totes | 345 | 0 | 3 | Steel | Unknown | |
| Room 2 | Paint Cans | 1 | 50-100 | 5 | Steel | Paint | |
| Room 2 | Square Chemical Totes | 345 | Unknown | 8 | Steel | Unknown | Some totes are inaccessible because of roof damage. |
| Room 2 | Square Chemical Totes | 345 | 50 | 1 | Steel | Unknown | |
| Room 3 | Aboveground Storage Tank | 3000 | Unknown | 1 | Steel | Unknown | Bottom of tank is 6' above floor, and top of tank protrudes above second story's floor level. Second story is inaccessible due to severe structural damage to the building. Piping from tank extends to floor level. Unknown if tank is open or closed at the top. |
| Room 3 | Square Chemical Totes | | | | Steel | Unknown | |
| Room 4 | Aboveground Storage Tank | 500 | Unknown | 2 | Unknown | Possible hot water tanks. | Tanks have insulated jackets on them. |
| Room 4 | Cylindrical Chemical Totes | 400-500 | 100 | 2 | Steel | Petroleum based products and sludge, paint products and sludge, and other contents that could not be determined. | |
| Room 4 | Square Chemical Totes | 350-500 | 75-100 | 37 | Steel | Petroleum based products and sludge, paint products and sludge, and other contents that could not be determined. | |
| Room 5 | 55-Gallon Drum | 55 | 75-100 | 125 | Steel | Unknown | |
| Room 5 | Aboveground Storage Tank | 20000 | Unknown | 2 | Steel | Unknown | |
| Room 5 | Cylindrical Chemical Totes | 350-500 | 50-100 | 25 | Steel | Unknown | |
| Room 5 | Cylindrical Chemical Totes | 750 | 0 | 1 | Steel | Unknown | |
| Room 5 | Cylindrical Chemical Totes | 345 | 0 | 21 | Steel | Unknown | |
| Room 5 | Square Chemical Totes | 345 | 0 | 60 | Steel | Unknown | |
| Room 5 | Square Chemical Totes | 400 | 0 | 2 | Poly | Unknown | |
| Stack Building | Aboveground Storage Tank | 275 | Unknown | 1 | Steel | Petroleum products. | Tank is inaccessible because of sludge that has piled up in room, which creates unstable footing. |

Table 3 - 1

Container Inventory
IWI Site, Summit, IL

| Location | Type of Container | Approximate Volume (Gallons) | % Full | Number | Tank Material | Suspected Contents | Comments |
|----------------|--------------------------------------|------------------------------|---------|--------|---------------|--------------------|---|
| Stack Building | Aboveground Storage Tank | 750 | 15 | 1 | Steel | Dried Sludge | Open top tank. |
| Stack Building | Loading Chute | 500 | 75 | 1 | Steel | Dried Sludge | Chute extends into sludge room and was probably the means of dumping all of the sludge into the room. |
| Stack Building | Room (which was used as a container) | Unknown | NA | 1 | NA | Dried Sludge | Room's windows and doors were rigged to prevent the sludge from escaping the room. |
| Upstairs | 55-Gallon Drum | 55 | 25-75 | 27 | Steel | Dried Sludge | |
| Upstairs | Aboveground Storage Tank | 15000 | Unknown | 1 | Fiberglass | Crude Coconut Oil | Appears to be empty. |
| Upstairs | Aboveground Storage Tank | 15000 | Unknown | 1 | Fiberglass | Tung Oil | Appears to contain some material. |
| Upstairs | Aboveground Storage Tank | 500 | 25-75 | 1 | Steel | Unknown | |
| Upstairs | Aboveground Storage Tank | 275 | 0 | 1 | Steel | Unknown | |
| Upstairs | Pails | 5 | 50-100 | 10 | Plastic | Unknown | |

Table 4 - 1

Surface Soil TCLP Metals Sampling Results
IWI Site, Summit, IL

| Sample ID | IWI-13 | IWI-13D | IWI-14 | IWI-15 | Criteria Level ^a |
|-----------------|---------|---------|-------------|---------|-----------------------------|
| Sample Type | soil | soil | soil | soil | |
| Chemical Name | | | | | |
| Arsenic (mg/L) | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 5.0 |
| Barium (mg/L) | 2.58 | 3.36 | 36.4 | 2.16 | 100.0 |
| Cadmium (mg/L) | 0.05 U | 0.05 U | 0.274 | 0.074 | 1.0 |
| Chromium (mg/L) | 0.1 U | 0.1 U | 0.228 | 0.1 U | 5.0 |
| Lead (mg/L) | 2.63 J | 4.06 J | 12.7 | 3.31 | 5.0 |
| Mercury (mg/L) | 0.001 U | 0.001 U | 0.001 U | 0.001 U | 0.2 |
| Selenium (mg/L) | 0.05 UJ | 0.05 UJ | 0.062 | 0.05 U | 1.0 |
| Silver (mg/L) | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 5.0 |

^a 40 CFR - Chapter 1 - 261.24, Maximum concentration of contaminants for the toxicity characteristic

Bold and highlighted sample concentrations are higher than the criteria level for that compound

Sample concentrations flagged with U are below method detection limits

Sample concentrations flagged with J are estimated

mg/L = milligrams per liter

Table 4 - 2

Surface Soil TAL Metals Sampling Results
IWI Site, Summit, IL

| Sample ID | IWI-13 | IWI-13D | IWI-14 | IWI-15 | Criteria Level | |
|-------------------|---------|----------|----------|---------|------------------------|-------------------|
| Sample Type | soil | soil | soil | soil | Industrial | |
| Chemical Name | | | | | Region IX ^a | TACO ^b |
| Aluminum (mg/kg) | 3,800 | 3,400 | 6,200 | 12,000 | 100,000 | N.L. |
| Antimony (mg/kg) | 59 J | 26 J | 44 J | 18 J | 818 | 82 |
| Arsenic (mg/kg) | 29.5 | 15.6 | 12.2 | 37.2 | 439 | 61 |
| Barium (mg/kg) | 1,600 J | 980 J | 11,000 J | 1,300 J | 100,000 | 14,000 |
| Beryllium (mg/kg) | 1.94 J | 0.492 UJ | 1.3 J | 1.04 UJ | 2,242 | 410 |
| Cadmium (mg/kg) | 14.7 | 12.6 | 26.2 | 17.6 | 809 | 200 |
| Calcium (mg/kg) | 28,000 | 22,000 | 21,000 | 58,000 | N.L. | N.L. |
| Chromium (mg/kg) | 820 | 170 | 400 | 48 | 448 | 420 |
| Cobalt (mg/kg) | 15 | 10 | 5.7 | 14 | 100,000 | 12,000 |
| Copper (mg/kg) | 180 | 52 | 61 | 150 | 75,908 | 8,200 |
| Iron (mg/kg) | 38,000 | 20,000 | 8,700 | 27,000 | 100,000 | N.L. |
| Lead (mg/kg) | 4,240 | 2,840 | 1,850 | 1,870 | 750 | 400 |
| Magnesium (mg/kg) | 11,000 | 8,400 J | 6,300 | 240,000 | N.L. | N.L. |
| Manganese (mg/kg) | 770 J | 530 | 260 J | 340 J | 32,250 | 9,600 |
| Mercury (mg/kg) | 0.06 | 0.05 | 0.12 | 0.04 | 613 | 61 |
| Nickel (mg/kg) | 6.2 | 8.7 | 7.9 | 61 | 40,877 | 4,100 |
| Potassium (mg/kg) | 380 | 300 | 380 | 1300 | N.L. | N.L. |
| Selenium (mg/kg) | 4.59 | 3.12 | 1.39 | 5.24 | 10,220 | 1,000 |
| Silver (mg/kg) | 2.2 | 0.49 UJ | 1.4 J | 1 UJ | 10,220 | 1,000 |
| Sodium (mg/kg) | 1,300 J | 950 | 1,200 | 2,100 | N.L. | N.L. |
| Thallium (mg/kg) | 0.673 U | 0.492 U | 0.513 U | 1.04 U | 135 | 160 |
| Vanadium (mg/kg) | 9 | 7.9 | 8 | 79 | 14,308 | 1,400 |
| Zinc (mg/kg) | 1,100 J | 660 J | 1,200 J | 2,500 J | 100,000 | 61,000 |

^a U.S. EPA Region IX Industrial PRGs for Combined Exposure Pathways

^b IEPA TACO Tier 1 Remediation Objectives for Industrial/Commercial Properties

Bold and highlighted sample concentrations are higher than the most conservative industrial criteria level for that compound

Sample concentrations flagged with U were below method detection limits

Sample concentrations flagged with J are estimated

N.L. = Not listed

ug/kg = micrograms per kilogram

Table 4 - 3
Surface Soil Organic Compounds Sampling Results
IWI Site, Summit, IL

| Sample ID | IWI-13 | IWI-13D | IWI-14 | IWI-15 | Criteria Level | |
|--|---------|---------|---------|---------|------------------------|-------------------|
| Sample Type | soil | soil | soil | soil | Industrial | |
| Chemical Name | | | | | Region IX ^a | TACO ^b |
| <i>Volatile Organic Compounds</i> | | | | | | |
| 1,2,4-Trimethylbenzene (ug/kg) | 14 UJ | 11 U | 58 J | 1900 JE | 1.7E+05 | N.L. |
| 1,3,5-Trimethylbenzene (ug/kg) | 14 UJ | 11 U | 35 J | 1600 JE | 7.0E+04 | N.L. |
| Acetone (ug/kg) | 99 J | 150 | 83 J | 260 | 6.2E+06 | 1.0E+08 |
| Ethylbenzene (ug/kg) | 14 J | 35 | 11 UJ | 4200 JE | 2.3E+05 | 5.8E+04 |
| Isopropylbenzene (Cumene) (ug/kg) | 14 UJ | 11 UJ | 11 UJ | 180 | 5.2E+05 | N.L. |
| m&p-xylene (ug/kg) | 50 J | 140 | 27 J | 5900 JE | 2.1E+05 | 4.2E+05 |
| Naphthalene (ug/kg) | 14 UJ | 11 U | 11 UJ | 1100 JE | N.L. | 1.8E+03 |
| n-Propylbenzene (ug/kg) | 14 UJ | 11 U | 4.8 J | 22 U | 2.4E+05 | N.L. |
| o-xylene (ug/kg) | 20 J | 70 | 17 J | 4400 JE | 2.1E+05 | 4.1E+05 |
| p-Isopropyltoluene (ug/kg) | 14 UJ | 11 U | 11 UJ | 34 | N.L. | N.L. |
| Toluene (ug/kg) | 14 UJ | 11 U | 11 UJ | 430 | 5.2E+05 | 4.2E+04 |
| <i>Semivolatile Organic Compounds</i> | | | | | | |
| Bis(2-ethylhexyl)phthalate (ug/kg) | 5.0E+05 | 4.2E+05 | 1.5E+06 | 6.2E+05 | 1.8E+05 | N.L. |

^a U.S. EPA Region IX Industrial PRGs for Combined Exposure Pathways

^b IEPA TACO Tier 1 Remediation Objectives for Industrial/Commercial Properties

Only samples where one or more concentrations were greater than method detection limits are shown in this table

Bold and highlighted sample concentrations are higher than the most conservative industrial criteria level for that compound

Sample concentrations flagged with U were below method detection limits

Sample concentrations flagged with J are estimated

Sample concentrations flagged with E exceeded instrument calibration limits

N.L. = Not listed

ug/kg = micrograms per kilogram

Table 4 - 4

Container TCLP Metals Sampling Results
IWI Site, Summit, IL

| Chemical Name | Arsenic (mg/L) | Barium (mg/L) | Cadmium (mg/L) | Chromium (mg/L) | Lead (mg/L) | Mercury (mg/L) | Selenium (mg/L) | Silver (mg/L) |
|-------------------------------|-------------------|------------------|-------------------|--------------------|-------------|-------------------|--------------------|---------------|
| Sample Type | waste | waste | waste | waste | waste | waste | waste | waste |
| Regulatory Level ^a | 5.0 | 100.0 | 1.0 | 5.0 | 5.0 | 0.2 | 1.0 | 5.0 |
| Sample ID | | | | | | | | |
| IWI-1 | 0.05 U | 0.724 | 0.05 U | 42.4 | 0.05 U | 0.001 U | 0.05 U | 0.1 UJ |
| IWI-2 | 0.05 U | 0.28 | 0.05 U | 0.1 U | 0.094 | 0.001 U | 0.05 U | 0.1 UJ |
| IWI-3 | 0.05 U | 0.2 U | 0.05 U | 0.1 U | 0.05 U | 0.001 U | 0.05 U | 0.1 UJ |
| IWI-4 | 0.05 U | 1.96 | 0.05 U | 0.1 U | 7.18 | 0.001 U | 0.05 U | 0.1 UJ |
| IWI-5 | 0.05 U | 1.49 | 0.085 | 0.278 | 4.64 | 0.001 U | 0.05 U | 0.1 UJ |
| IWI-6 | 0.05 U | 0.299 | 0.05 U | 0.1 U | 0.05 U | 0.001 U | 0.05 U | 0.1 UJ |
| IWI-7 | 0.05 U | 0.2 U | 0.05 U | 0.1 U | 281 | 0.001 U | 0.05 U | 0.1 UJ |
| IWI-8 | 0.05 U | 0.2 U | 0.05 U | 0.1 U | 0.313 | 0.001 U | 0.05 U | 0.1 UJ |
| IWI-9 | 0.05 U | 0.423 | 0.05 U | 0.1 U | 4.95 | 0.001 U | 0.05 U | 0.1 UJ |
| IWI-10 | 0.05 U | 0.289 | 0.05 U | 0.1 U | 0.085 | 0.001 U | 0.05 U | 0.1 UJ |
| IWI-11 | 0.05 U | 3.12 | 0.05 U | 0.463 | 0.072 | 0.001 U | 0.05 U | 0.1 UJ |
| IWI-12 | 0.05 U | 0.2 U | 0.05 U | 0.1 U | 0.173 | 0.001 U | 0.05 U | 0.1 UJ |

^a 40 CFR - Chapter 1 - 261.24, Maximum concentration of contaminants for the toxicity characteristic
Bold and highlighted sample concentrations are higher than the criteria level for that compound
Sample concentrations flagged with U are below method detection limits
mg/L = milligrams per liter

Table 4 - 5

**Container TCLP Volatile Organic Compounds Sampling Results
IWI Site, Summit, IL**

| Sample ID | 2-Butanone (MEK) (ug/L) | Tetrachloroethene (ug/L) |
|-------------------------------------|------------------------------------|-------------------------------------|
| Sample Type | waste | waste |
| Regulatory Level^a | 200,000 | 700 |
| Chemical Name | | |
| IWI-1 | 3,700 | 20 U |
| IWI-2 | 100 U | 20 U |
| IWI-3 | 100 U | 210 |
| IWI-4 | 100 U | 20 U |
| IWI-5 | 100 U | 20 U |
| IWI-6 | 100 U | 20 U |
| IWI-7 | 100 U | 20 U |
| IWI-8 | 100 U | 20 U |
| IWI-9 | 100 U | 20 U |
| IWI-10 | 100 U | 20 U |
| IWI-11 | 1,500 | 20 U |
| IWI-12 | 100 U | 20 U |

^a 40 CFR - Chapter 1 - 261.24, Maximum concentration of contaminants for the toxicity characteristic
Bold and highlighted sample concentrations are higher than the criteria level for that compound
Sample concentrations flagged with U were below method detection limits
ug/L = micrograms per liter

Table 4 - 6

Container Other Characteristics of Hazardous Waste Sampling Results
IWI Site, Summit, IL

| Analysis | Cyanide Reactivity (mg/kg) | Sulfide Reactivity (mg/kg) | pH (temperature at analysis) | Flashpoint (°F) | Paint filter test |
|-------------------------------|-------------------------------|-------------------------------|---------------------------------|-----------------|-------------------|
| Sample Type | waste | waste | waste | waste | waste |
| Regulatory Level ^a | 250 | 500 | 2>pH or pH>12.5 | <140 | |
| Sample ID | | | | | |
| IWI-1 | 1 U | 242 | 6.28 | 85 | Fail |
| IWI-2 | 1 U | 259 | 4.5 | 90 | Fail |
| IWI-3 | 1 U | 212 | 8.8 | 85 | Fail |
| IWI-4 | 1 U | 261 | 5.94 | 90 | Pass |
| IWI-5 | 1 U | 385 | 5.47 | 90 | Pass |
| IWI-6 | 1 U | 302 | 4.96 | 105 | Fail |
| IWI-7 | 1 U | 169 | 5.52 | 95 | Pass |
| IWI-8 | 1 U | 152 | 10.7 | 100 | Pass |
| IWI-9 | 1 U | 445 | 6.63 | 155 | Pass |
| IWI-10 | 1 U | 390 | 5.55 | 90 | Pass |
| IWI-11 | 1 U | 298 | 5.55 | 75 | Pass |
| IWI-12 | 1 U | 485 | 5.5 | 120 | Pass |

^a 40 CFR - Chapter 1 - 261.21 and 261.23

Bold and highlighted sample results exceed the criteria level

Sample concentrations flagged with U were below method detection limits

NA = not applicable

mg/kg = milligrams per kilogram

°F = degrees Fahrenheit

Pass = No free liquid present

Fail = Free liquid present

Table 4 - 7

Container TAL Metals Sampling Results
IWI Site, Summit, IL

| Sample ID | IWI-1 | IWI-2 | IWI-3 | IWI-4 | IWI-5 | IWI-6 |
|-------------------|---------|---------|---------|---------|---------|---------|
| Sample Type | sludge | sludge | sludge | sludge | sludge | sludge |
| Chemical Name | | | | | | |
| Aluminum (mg/kg) | 1800 | 330 | 52 | 3000 | 10000 | 74 |
| Antimony (mg/kg) | 74 | 68 | 3.9 U | 2200 | 110 | 4 U |
| Arsenic (mg/kg) | 1.42 | 1.49 | 0.658 U | 7.53 | 14.5 | 0.662 U |
| Barium (mg/kg) | 720 | 650 | 100 | 1400 | 2100 | 17 |
| Beryllium (mg/kg) | 36.3 | 0.329 U | 0.329 U | 0.329 U | 0.329 U | 0.331 U |
| Cadmium (mg/kg) | 0.587 J | 3.53 J | 3.73 J | 0.367 J | 30.9 J | 0.31 U |
| Calcium (mg/kg) | 75 | 5900 | 210 | 5800 | 14000 | 290 |
| Chromium (mg/kg) | 14000 | 23 | 52 | 27 | 500 | 0.66 U |
| Cobalt (mg/kg) | 0.66 U | 1.7 | 0.89 | 0.66 U | 10 | 0.66 U |
| Copper (mg/kg) | 4 | 25 | 80 | 6.9 | 290 | 180 |
| Iron (mg/kg) | 350 | 1500 | 75 | 3300 | 15000 | 200 |
| Lead (mg/kg) | 112 | 79.7 | 101 | 5860 | 1770 | 1.87 |
| Magnesium (mg/kg) | 66 U | 400 | 66 U | 4700 | 3800 | 66 U |
| Manganese (mg/kg) | 4.4 | 35 | 2.3 | 95 | 110 | 1.6 |
| Mercury (mg/kg) | 0.03 U | 0.03 | 0.17 | 0.03 | 0.71 | 0.03 U |
| Nickel (mg/kg) | 1.3 U | 1.3 U | 1.3 U | 30 | 25 | 1.3 U |
| Potassium (mg/kg) | 66 U | 66 U | 950 | 100 | 800 | 66 U |
| Selenium (mg/kg) | 0.461 U | 0.986 | 0.593 | 1.45 | 1.62 | 0.676 |
| Silver (mg/kg) | 46 | 0.33 U | 0.33 U | 0.33 U | 2.1 | 0.33 U |
| Sodium (mg/kg) | 66 U | 500 | 650 | 370 | 3700 | 89 |
| Thallium (mg/kg) | 0.329 U | 0.329 U | 0.329 U | 0.329 U | 0.329 U | 0.331 U |
| Vanadium (mg/kg) | 15 | 0.99 | 0.66 U | 0.66 U | 3.7 | 0.66 U |
| Zinc (mg/kg) | 140 | 340 | 130 | 800 | 1600 | 4.9 |

Sample concentrations flagged with U were below method detection limits

Sample concentrations flagged with J are estimated

N L. = Not listed

ug/kg = micrograms per kilogram

Table 4 - 7 (Continued)

Results of Container Samples Analysis for TAL Metals
IWI Site, Summit, IL

| Sample ID | IWI-7 | IWI-8 | IWI-9 | IWI-10 | IWI-11 | IWI-12 |
|-------------------|----------|----------|---------|---------|---------|----------|
| Sample Type | sludge | sludge | sludge | sludge | sludge | sludge |
| Chemical Name | | | | | | |
| Aluminum (mg/kg) | 20 | 24 | 1700 | 290 | 220 | 6.7 |
| Antimony (mg/kg) | 4 U | 4 U | 24 | 5.4 | 31 | 4 U |
| Arsenic (mg/kg) | 0.662 U | 0.667 U | 1.93 | 3.27 | 0.667 U | 0.662 U |
| Barium (mg/kg) | 17 | 18 | 370 | 110 | 490 | 0.66 U |
| Beryllium (mg/kg) | 0.331 U | 0.333 U | 0.809 | 0.336 U | 0.333 U | 0.331 U |
| Cadmium (mg/kg) | 0.331 UJ | 0.331 UJ | 5.62 J | 0.486 J | 9.99 J | 0.331 UJ |
| Calcium (mg/kg) | 9400 | 180 | 3500 | 1200 | 6200 | 97 |
| Chromium (mg/kg) | 0.78 | 1.8 | 290 | 9.6 | 29 | 0.66 U |
| Cobalt (mg/kg) | 0.66 U | 0.67 U | 12 | 16 | 1.8 | 0.66 U |
| Copper (mg/kg) | 5.2 | 3.9 | 38 | 13 | 15 | 2.7 |
| Iron (mg/kg) | 140 | 160 | 2100 | 5700 | 380 | 7.4 |
| Lead (mg/kg) | 15900 | 29.1 | 4450 | 40.4 | 280 | 0.697 |
| Magnesium (mg/kg) | 84 | 78 | 1500 | 460 | 190 | 1000 |
| Manganese (mg/kg) | 1.4 | 1.9 | 50 | 42 | 47 | 0.66 U |
| Mercury (mg/kg) | 0.03 U | 0.03 U | 0.06 | 0.03 U | 0.03 | 0.03 |
| Nickel (mg/kg) | 1.3 U | 1.3 U | 1.8 | 1.3 U | 2.6 | 1.3 U |
| Potassium (mg/kg) | 66 U | 67 U | 160 | 67 U | 110 | 66 U |
| Selenium (mg/kg) | 0.803 | 0.499 | 0.804 | 1 | 0.803 | 0.536 |
| Silver (mg/kg) | 0.33 U | 0.33 U | 0.91 | 0.34 U | 0.33 U | 0.33 U |
| Sodium (mg/kg) | 330 | 780 | 1300 | 210 | 1300 | 430 |
| Thallium (mg/kg) | 0.331 U | 0.333 U | 0.329 U | 0.336 U | 0.333 U | 0.331 U |
| Vanadium (mg/kg) | 1.1 | 0.83 | 1.6 | 0.67 U | 0.67 U | 0.66 U |
| Zinc (mg/kg) | 8 | 1700 | 280 | 69 | 2000 | 18 |

Sample concentrations flagged with U were below method detection limits

Sample concentrations flagged with J are estimated

N.L. = Not listed

ug/kg = micrograms per kilogram

Table 4 - 8

Container Volatile Organic Compounds Sampling Results
IWI Site, Summit, IL

| Sample ID | IWI-1 | IWI-2 | IWI-3 |
|-------------------------------------|---------|--------|--------|
| Sample Type | sludge | sludge | sludge |
| Chemical Name | | | |
| 1,3,5-Trimethylbenzene (mg/kg) | 21,000 | 0.12 U | 7 |
| 2-Butanone (MEK) (mg/kg) | 2,200 | 7.60 | 100 U |
| 4-Methyl-2-pentanone (MIBK) (mg/kg) | 1,100 | 2.10 | 100 U |
| Acetone (mg/kg) | 1,000 U | 5.50 | 100 U |
| Carbon disulfide (mg/kg) | 200 U | 0.21 | 20 U |
| cis-1,2-Dichloroethene (mg/kg) | 200 U | 0.22 | 20 U |
| Ethylbenzene (mg/kg) | 860 | 0.12 | 390 |
| Isopropylbenzene (Cumene) (mg/kg) | 2,200 | 0.12 U | 20 U |
| m&p-xylene (mg/kg) | 4,400 | 0.43 | 1,600 |
| Methylene chloride (mg/kg) | 200 U | 0.05 | 20 U |
| Naphthalene (mg/kg) | 4,600 | 0.21 | 51 |
| n-Butylbenzene (mg/kg) | 2,500 | 0.11 | 25 |
| n-Propylbenzene (mg/kg) | 11,000 | 0.12 U | 140 |
| o-xylene (mg/kg) | 4,900 | 0.17 | 380 |
| p-Isopropyltoluene (mg/kg) | 670 | 0.12 U | 12 |
| sec-Butylbenzene (mg/kg) | 1,200 | 0.12 U | 20 U |
| tert-Butylbenzene (mg/kg) | 200 U | 0.12 U | 11 |
| Tetrachloroethene (mg/kg) | 200 U | 0.12 U | 82 |
| Toluene (mg/kg) | 650 | 6.90 | 400 |

Sample concentrations flagged with U were below method detection limits

N.L. = Not listed

mg/kg = micrograms per kilogram

APPENDIX A

PHOTO LOG



Photo 1 (EPA Site Visit, 16 May 2002) - Poly drum located in the drainage ditch along the western boundary of the site. The picture was taken facing east from the adjacent property.



Photo 2 (EPA Site Visit, 16 May 2002) - View of drum storage room from adjacent property facing east.



Photo 3 (EPA Site Visit, 16 May 2002) - Drainage ditch located along western boundary of site.

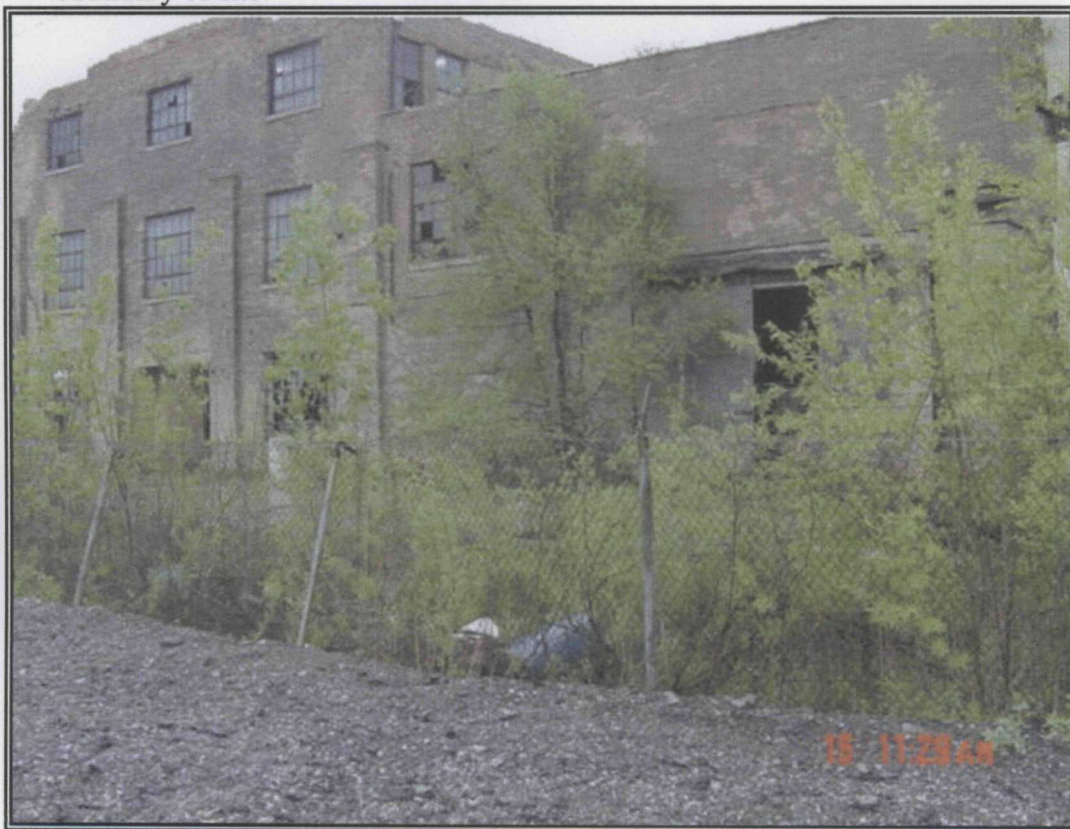


Photo 4 (EPA Site Visit, 16 May 2002) - Northwestern portion of the site facing east.



Photo 5 (EPA Site Visit, 16 May 2002) - Demolition of the buildings that were damaged by fire.



Photo 6 (EPA Site Visit, 16 May 2002) - Steel structure of the building during demolition.

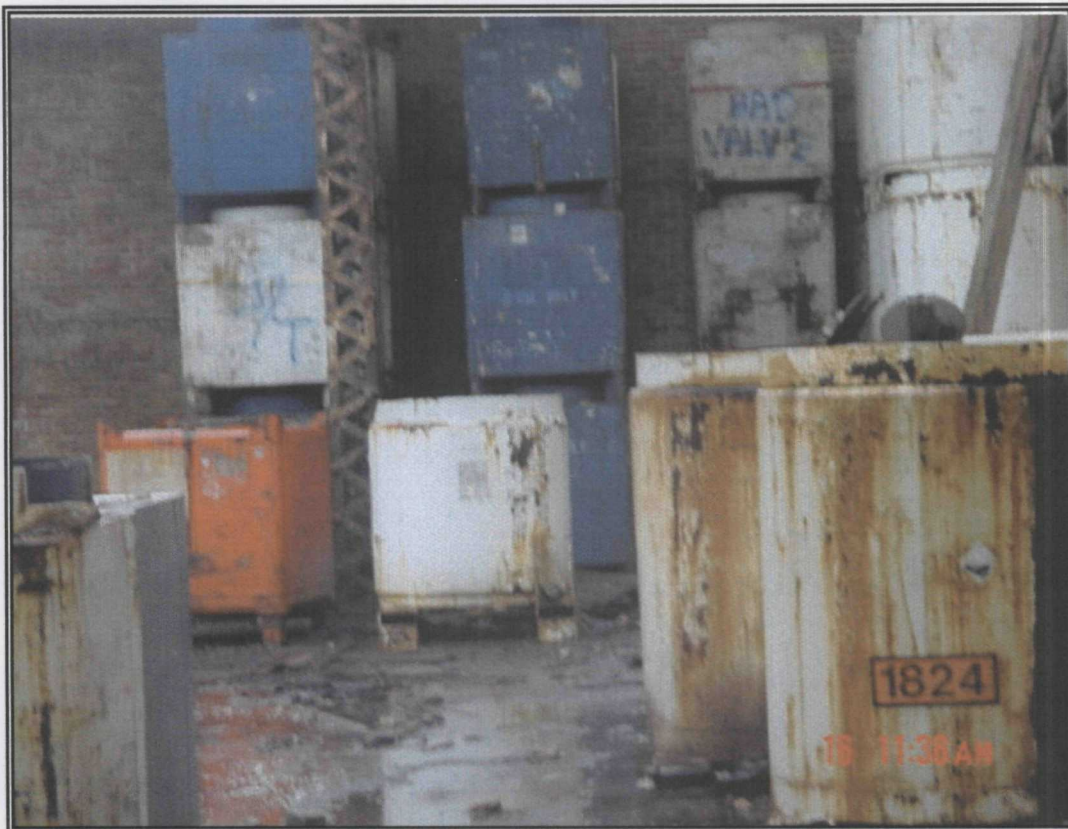


Photo 7 (EPA Site Visit, 16 May 2002) - Stacked chemical totes located in Room 5.



Photo 8 (EPA Site Visit, 16 May 2002) - Containers and drums located in Room 5.

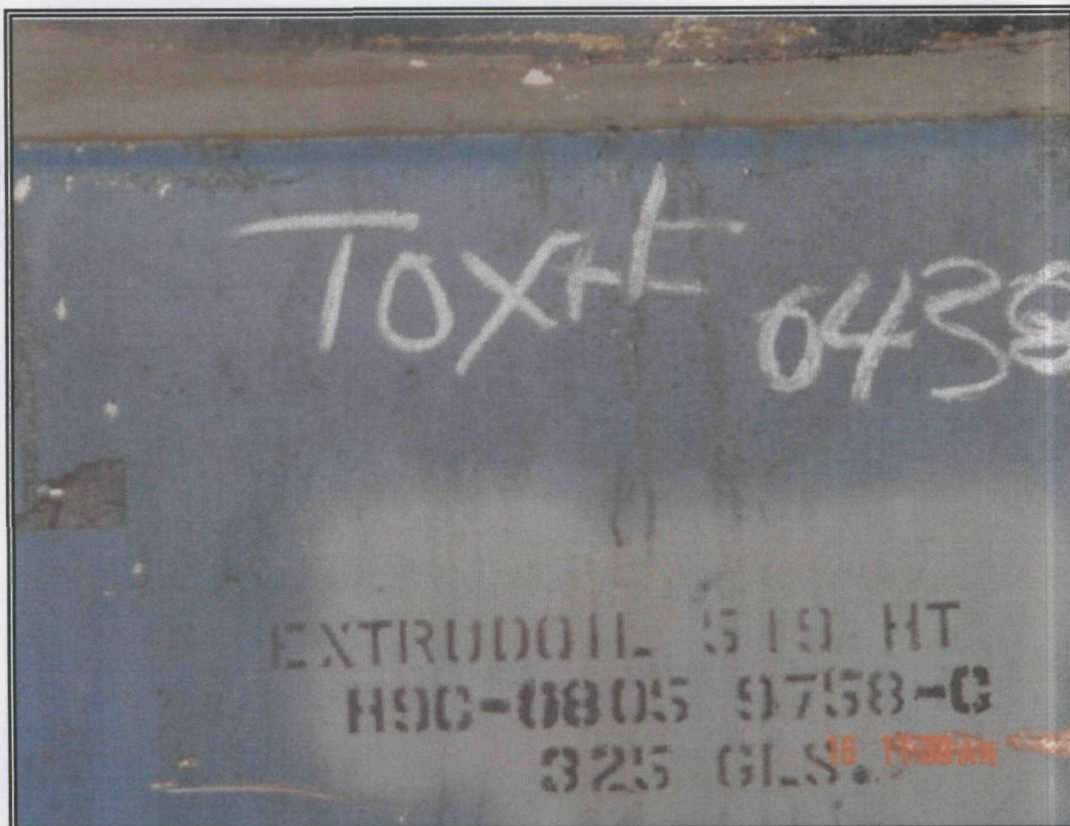


Photo 9 (EPA Site Visit, 16 May 2002) - Information label on one of the drums located in Room 5.



Photo 10 (EPA Site Visit, 16 May 2002) - Trench drain located in the floor of Room 5. The drain originates near the 20,000 gallon ASTs and is filled with a black oily liquid.

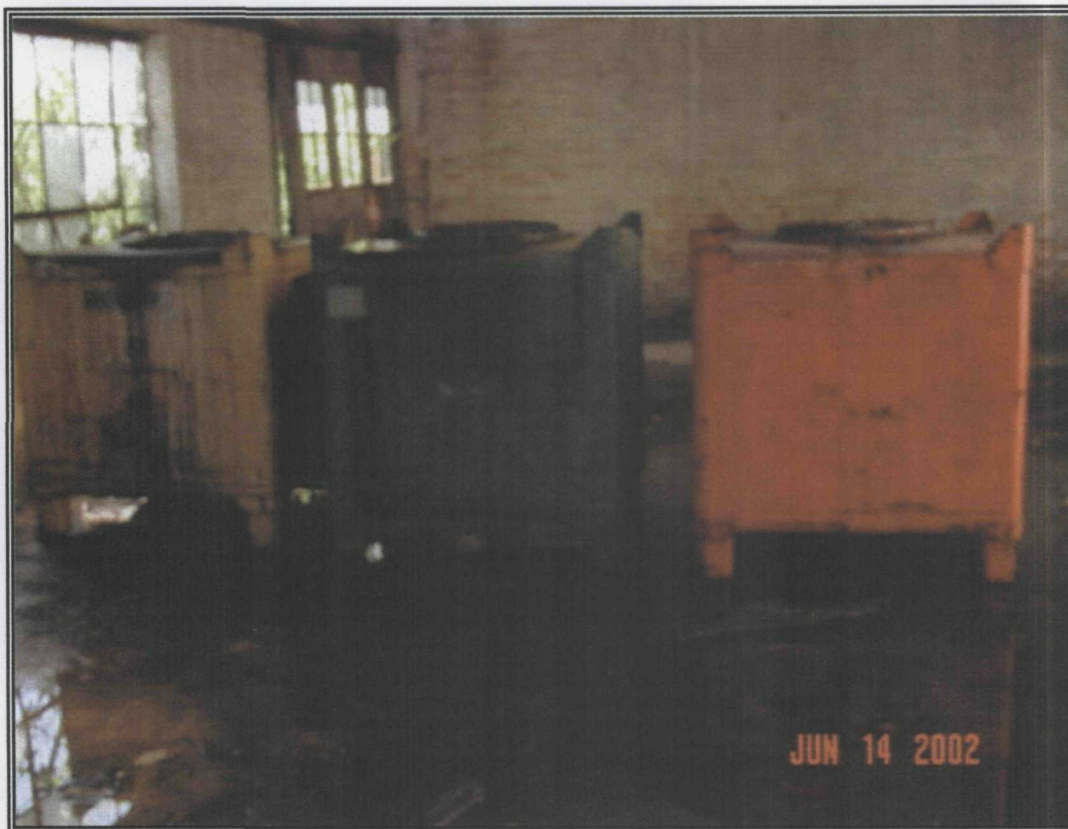


Photo 1 (Site Assessment Preliminary Visit, 14 June 2002) - Typical chemical totes found at the site, approximately 345 gallons.

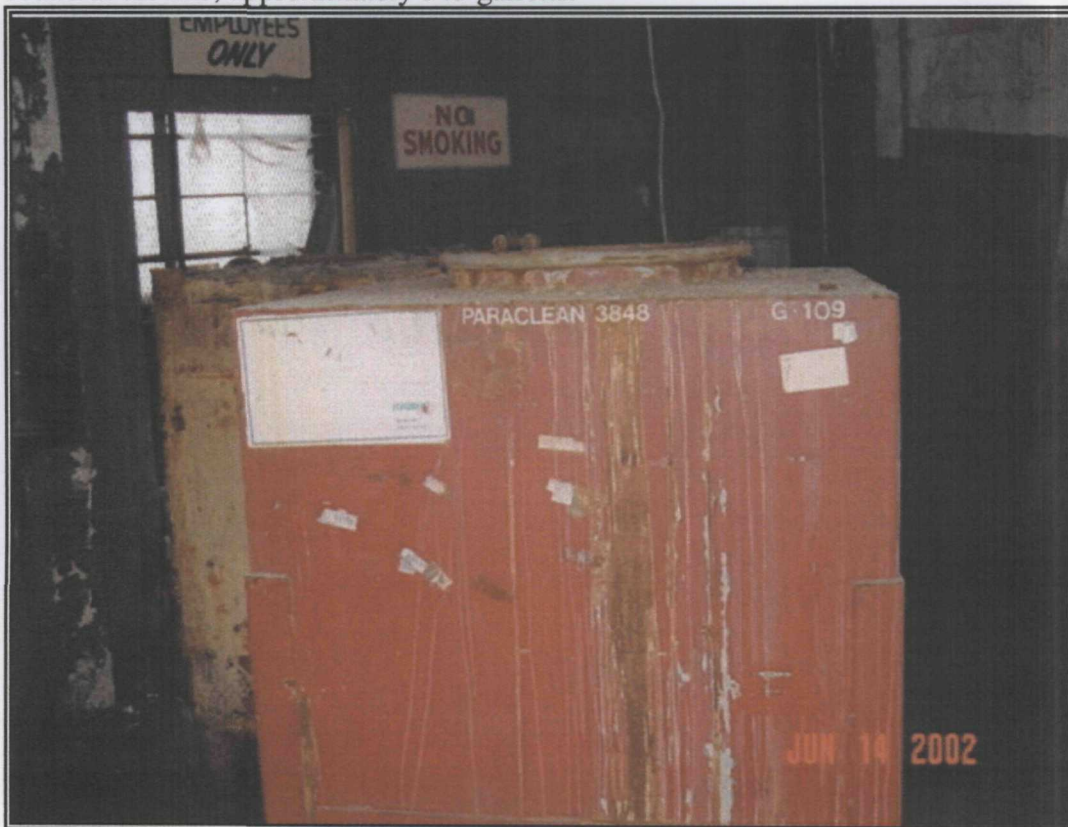


Photo 2 (Site Assessment Preliminary Visit, 14 June 2002) - Closer view of corrosion on the exterior of a typical chemical tote.



Photo 3 (Site Assessment Preliminary Visit, 14 June 2002) - Sump and suspected power generating equipment located in the Power Generation Room.



Photo 4 (Site Assessment Preliminary Visit, 14 June 2002) - View of HVAC equipment and AST in the northeast corner of the Stack Building. Note that the room has a layer of hardened sludge present.



Photo 5 (Site Assessment Preliminary Visit, 14 June 2002) - Ponding of surface water in the area where the demolished buildings were.



Photo 6 (Site Assessment Preliminary Visit, 14 June 2002) - Water tower platform and piping, the tank has been removed.

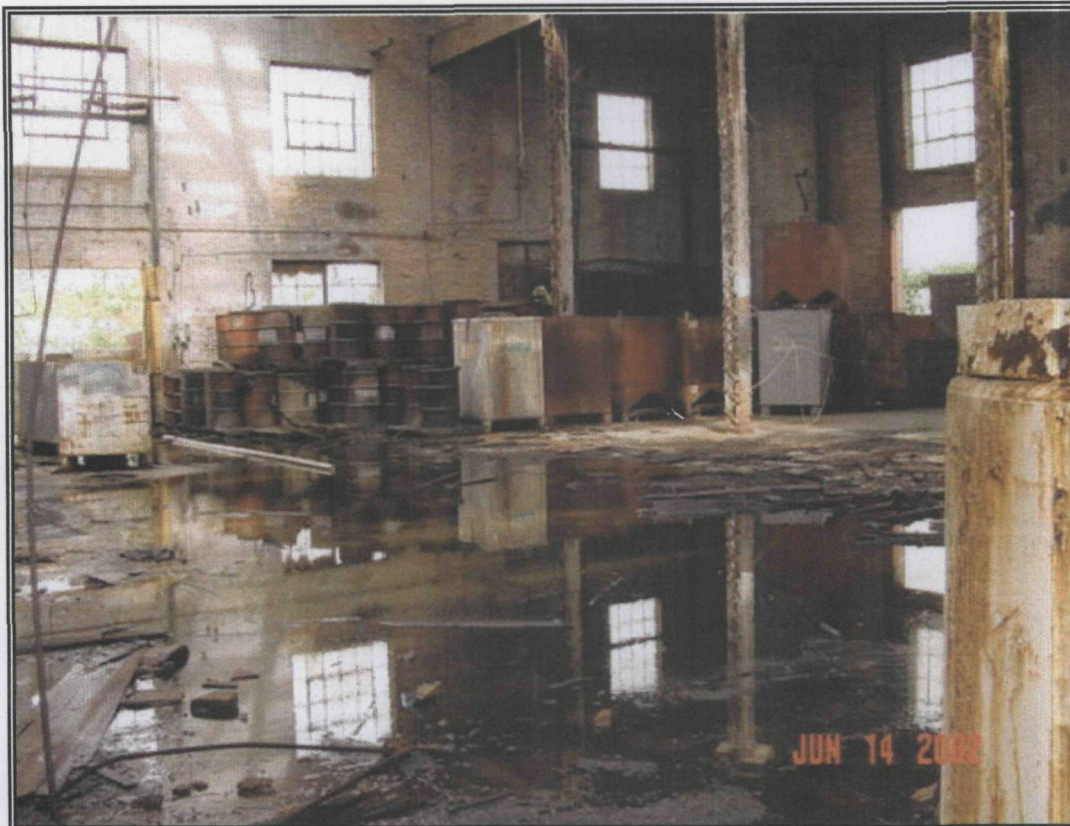


Photo 7 (Site Assessment Preliminary Visit, 14 June 2002) - Room 5 facing west, note the drum storage area.



Photo 8 (Site Assessment Preliminary Visit, 14 June 2002) - View of damaged roof in Room 5.

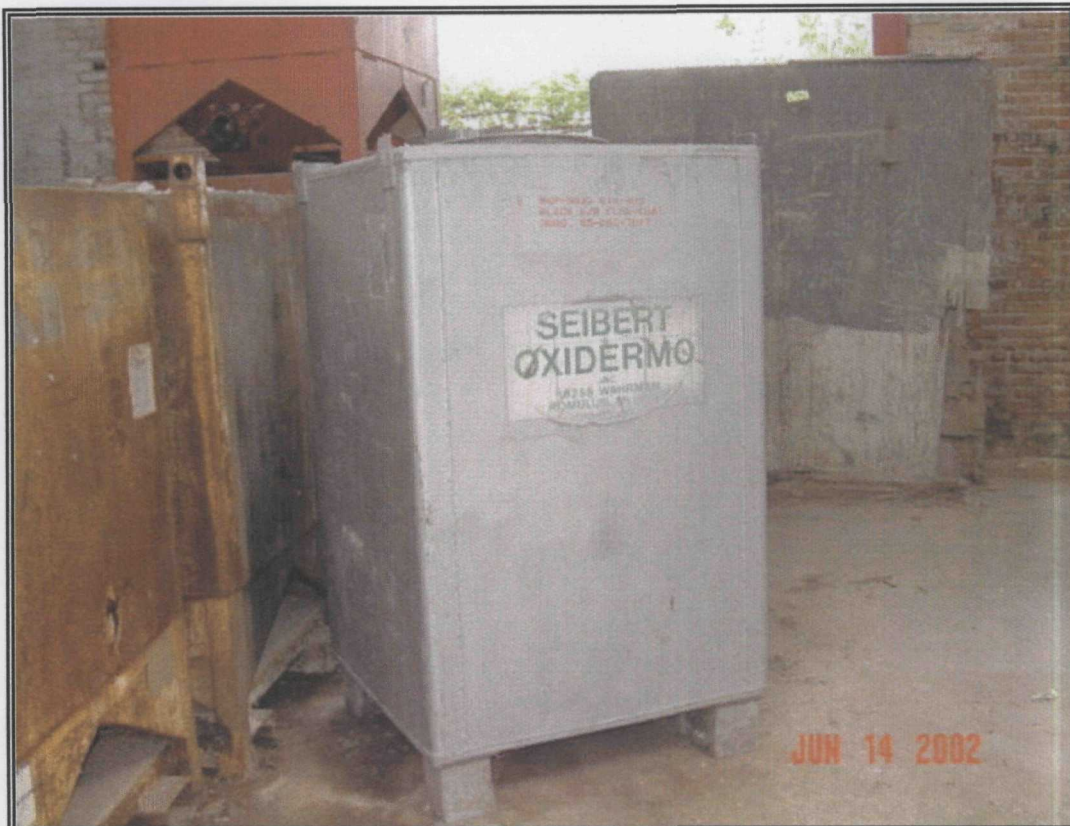


Photo 9 (Site Assessment Preliminary Visit, 14 June 2002) - Containers located in Room 5.

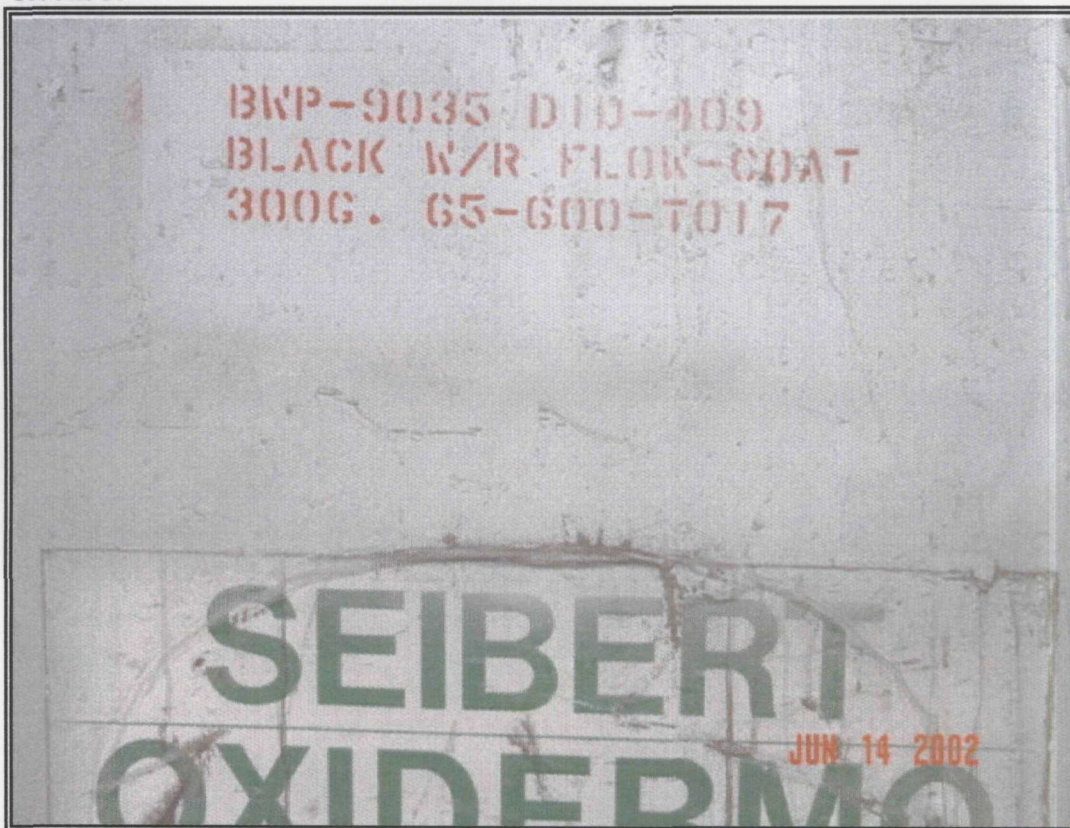


Photo 10 (Site Assessment Preliminary Visit, 14 June 2002) - View of label on container featured in Photo 9.

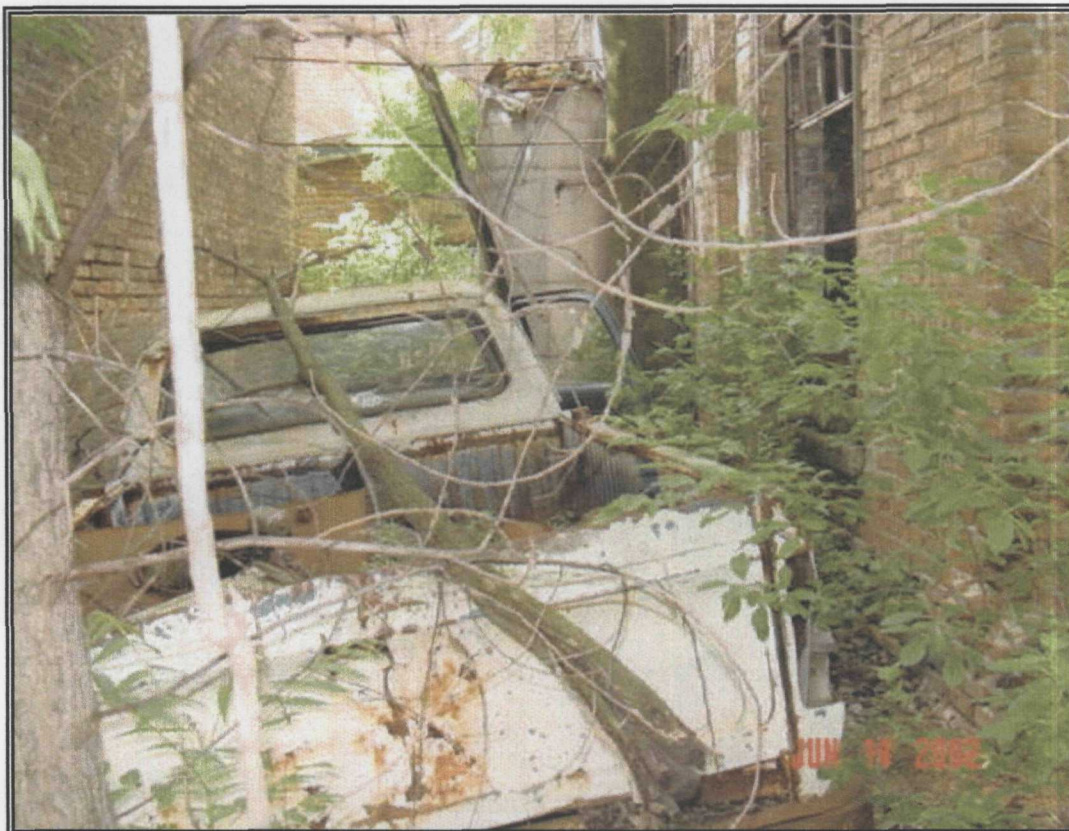


Photo 11 (Site Assessment Preliminary Visit, 14 June 2002) - Abandoned truck and insulated tank (located in the background) on east side of the Stack Building.



Photo 12 (Site Assessment Preliminary Visit, 14 June 2002) - Oily discharge from Drum Storage Area. This discharge flows directly to the drainage ditch located along the western boundary of the site.



Photo 13 (Site Assessment Preliminary Visit, 14 June 2002) - Chemical tote located near water tower.



Photo 14 (Site Assessment Preliminary Visit, 14 June 2002) - Label on tote featured in Photo 13.



Photo 15 (Site Assessment Preliminary Visit, 14 June 2002) - Unknown pipe along former east wall of demolished building.



Photo 16 (Site Assessment Preliminary Visit, 14 June 2002) - Containers located in Room 1 near the washing machine and sump.



Photo 17 (Site Assessment Preliminary Visit, 14 June 2002) - Stacked containers and damaged roof located in Room 3.

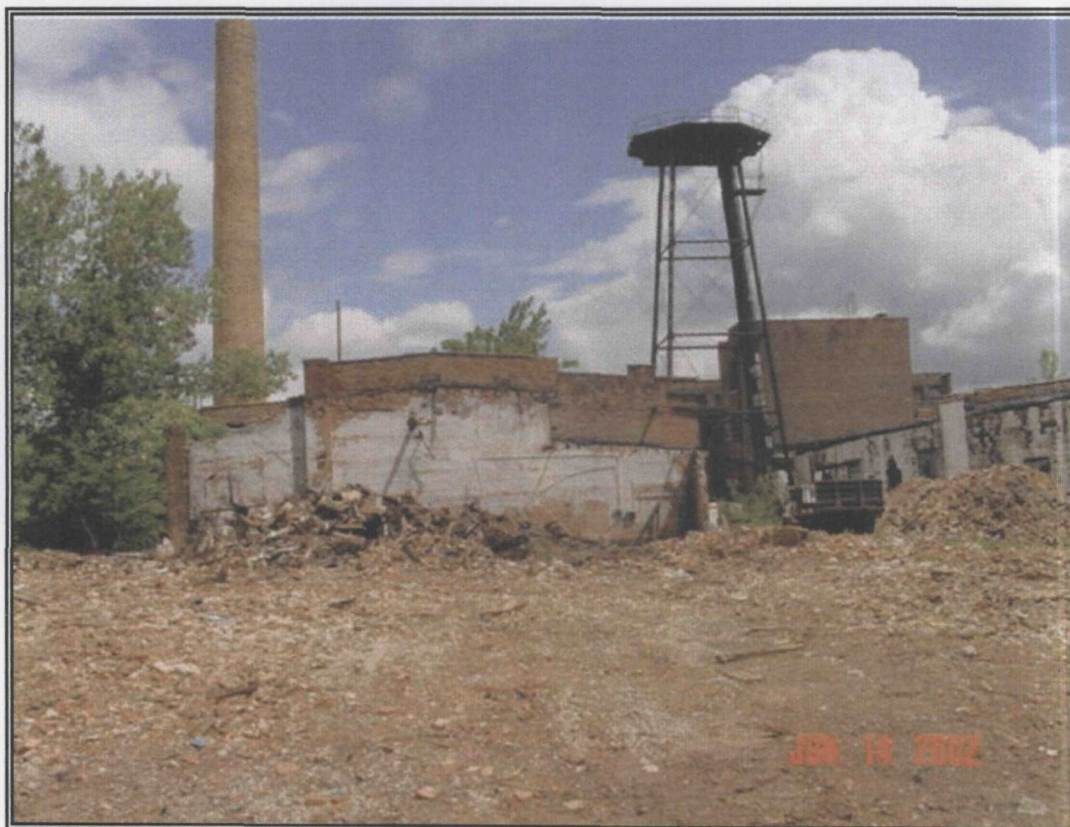


Photo 18 (Site Assessment Preliminary Visit, 14 June 2002) - View of the site facing north.



Photo 1 (Site Assessment, 24 June 2002) - Possibly corroded rocks located outside of Room 4.



Photo 2 (Site Assessment, 24 June 2002) - Damaged floor located in the upstairs room, which is directly above Room 4.



Photo 3 (Site Assessment, 24 June 2002) - Fiberglass AST located upstairs labeled as Tung Oil.



Photo 4 (Site Assessment, 24 June 2002) - Fiberglass AST located upstairs labeled as Crude Coconut Oil.



Photo 5 (Site Assessment, 24 June 2002) - Drums located upstairs filled with solids.



Photo 6 (Site Assessment, 24 June 2002) - Damaged pipewrap located upstairs.



Photo 7 (Site Assessment, 24 June 2002) - Sheen and oily mousse on the standing water located near the 20,000 gallon ASTs in Room 5.



Photo 8 (Site Assessment, 24 June 2002) - Transite panels located on the south side of the Stack Building.



Photo 9 (Site Assessment, 24 June 2002) - Unknown tank that originates on the 2nd floor, as seen from Room 3.



Photo 10 (Site Assessment, 24 June 2002) - Containers and drums located in Room 5. The container with a spraypainted "6" is where sample IWI-6 was collected.



Photo 11 (Site Assessment, 24 June 2002) - Heat exchangers located in the Stack Building.



Photo 12 (Site Assessment, 24 June 2002) - Sludge buildup located in the Stack Building.

APPENDIX B

ANALYTICAL DATA

Weston Solutions Inc.

750 E Bunker Ct, Suite 500

Vernon Hills, IL 60061

Tel: (847) 918-4094

Fax: (847) 918-4055

Attn: Ms. Tonya Balla

VOA8260B & TCLP VOA8260B

ACE Technologies Inc.

1680 Lake Front Circle, Ste. B

The Woodlands, TX 78130

Phone: (281) 363-2233

Fax : (281) 298-5784

Date: 7/15/2002

Project Name: IWI/ITASCO

Episode #: 8067

| Lab Sample ID | 001 | 002 | 003 | 004 | 005 | 006 | 007 | 008 | 009 | 010 | 011 | 12 |
|-------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Client Sample I D | IWI-5 | IWI-6 | IWI-7 | IWI-8 | IWI-9 | IWI-10 | IWI-11 | IWI-12 | IWI-1 | IWI-2 | IWI-3 | IWI-4 |
| Sample Matrix | Soil | Soil | Soil | Soil | Soil | Soil | Soil | Soil | Soil | Soil | Soil | Soil |
| Date Sampled | 6/24/2002 | 6/24/2002 | 6/24/2002 | 6/24/2002 | 6/24/2002 | 6/24/2002 | 6/24/2002 | 6/24/2002 | 6/24/2002 | 6/24/2002 | 6/24/2002 | 6/24/2002 |
| Time Sampled | 1345 | 1400 | 1415 | 1430 | 1445 | 1500 | 1515 | 1530 | 1300 | 1315 | 1325 | 1335 |

| | | | | | | | | | | | | |
|---------------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Episode #: | 8067 | | | | | | | | | | | |
| Lab Sample ID | 001 | 002 | 003 | 004 | 005 | 006 | 007 | 008 | 009 | 010 | 011 | 12 |
| Client Sample I D | IWI-5 | IWI-6 | IWI-7 | IWI-8 | IWI-9 | IWI-10 | IWI-11 | IWI-12 | IWI-1 | IWI-2 | IWI-3 | IWI-4 |
| Sample Matrix | Soil | Soil | Soil | Soil | Soil | Soil | Soil | Soil | Soil | Soil | Soil | Soil |
| Date Sampled | 6/24/2002 | 6/24/2002 | 6/24/2002 | 6/24/2002 | 6/24/2002 | 6/24/2002 | 6/24/2002 | 6/24/2002 | 6/24/2002 | 6/24/2002 | 6/24/2002 | 6/24/2002 |
| Time Sampled | 1345 | 1400 | 1415 | 1430 | 1445 | 1500 | 1515 | 1530 | 1300 | 1315 | 1325 | 1335 |
| | Units | RL/5g dry | | | | | | | | | | |
| VOA 8260B(Contd....) | | | | | | | | | | | | |
| Bromobenzene | ug/kg | 120.0 | | | | | | | <200000 | <120 | <20000 | |
| Bromochloromethane | ug/kg | 120.0 | | | | | | | <200000 | <120 | <20000 | |
| Bromodichloromethane | ug/kg | 120.0 | | | | | | | <200000 | <120 | <20000 | |
| Bromoform | ug/kg | 120.0 | | | | | | | <200000 | <120 | <20000 | |
| Bromomethane | ug/kg | 120.0 | | | | | | | <200000 | <120 | <20000 | |
| Carbon disulfide | ug/kg | 120.0 | | | | | | | <200000 | 210 | <20000 | |
| Carbon tetrachloride | ug/kg | 120.0 | | | | | | | <200000 | <120 | <20000 | |
| Chlorobenzene | ug/kg | 120.0 | | | | | | | <200000 | <120 | <20000 | |
| Chloroethane | ug/kg | 120.0 | | | | | | | <200000 | <120 | <20000 | |
| Chloroform | ug/kg | 120.0 | | | | | | | <200000 | <120 | <20000 | |
| Chloromethane | ug/kg | 120.0 | | | | | | | <200000 | <120 | <20000 | |
| cis-1,2-Dichloroethene | ug/kg | 120.0 | | | | | | | <200000 | 220 | <20000 | |
| cis-1,3-Dichloropropene | ug/kg | 120.0 | | | | | | | <200000 | <120 | <20000 | |
| Dibromochloromethane | ug/kg | 120.0 | | | | | | | <200000 | <120 | <20000 | |
| Dibromomethane | ug/kg | 120.0 | | | | | | | <200000 | <120 | <20000 | |
| Dichlorodifluoromethane | ug/kg | 120.0 | | | | | | | <200000 | <120 | <20000 | |
| Ethyl benzene | ug/kg | 120.0 | | | | | | | 860000 | 120 | 390000 | |
| Hexachlorobutadiene | ug/kg | 120.0 | | | | | | | <200000 | <120 | <20000 | |
| Iodomethane | ug/kg | 120.0 | | | | | | | <200000 | <120 | <20000 | |
| Isopropylbenzene | ug/kg | 120.0 | | | | | | | 2200000 | <120 | <20000 | |
| m/p-xylene | ug/kg | 250.0 | | | | | | | 4400000 | 430 | 1600000 | |
| Methyl t-Butylether | ug/kg | 120.0 | | | | | | | <200000 | <120 | <20000 | |
| Methylene chloride | ug/kg | 120.0 | | | | | | | <200000 | 54 | <20000 | |
| n-Butylbenzene | ug/kg | 120.0 | | | | | | | 2500000 | 110 | 25000 | |
| n-Propylbenzene | ug/kg | 120.0 | | | | | | | 11000000 | <120 | 140000 | |
| Naphthalene | ug/kg | 120.0 | | | | | | | 4600000 | 210 | 51000 | |
| o-Xylene | ug/kg | 120.0 | | | | | | | 4900000 | 170 | 380000 | |
| p-Isopropyltoluene | ug/kg | 120.0 | | | | | | | 670000 | <120 | 12000 | |
| sec-Butylbenzene | ug/kg | 120.0 | | | | | | | 1200000 | <120 | <20000 | |
| Styrene | ug/kg | 120.0 | | | | | | | <200000 | <120 | <20000 | |
| tert-Butylbenzene | ug/kg | 120.0 | | | | | | | <200000 | <120 | 11000 | |
| Tetrachloroethene | ug/kg | 120.0 | | | | | | | <200000 | <120 | 82000 | |
| Toluene | ug/kg | 120.0 | | | | | | | 650000 | 6900 | 400000 | |
| trans-1,2-Dichloroethene | ug/kg | 120.0 | | | | | | | <200000 | <120 | <20000 | |
| trans-1,3-Dichloropropene | ug/kg | 120.0 | | | | | | | <200000 | <120 | <20000 | |
| Trichloroethene | ug/kg | 120.0 | | | | | | | <200000 | <120 | <20000 | |
| Trichlorofluoromethane | ug/kg | 120.0 | | | | | | | <200000 | <120 | <20000 | |
| Vinyl Acetate | ug/kg | 620.0 | | | | | | | <1000000 | <620 | <100000 | |
| Vinyl chloride | ug/kg | 120.0 | | | | | | | <200000 | <120 | <20000 | |

| | | | | | | | | | | | | |
|----------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Episode #: | 8067 | | | | | | | | | | | |
| Lab Sample ID | 001 | 002 | 003 | 004 | 005 | 006 | 007 | 008 | 009 | 010 | 011 | 12 |
| Client Sample I D | IWI-5 | IWI-6 | IWI-7 | IWI-8 | IWI-9 | IWI-10 | IWI-11 | IWI-12 | IWI-1 | IWI-2 | IWI-3 | IWI-4 |
| Sample Matrix | Soil | Soil | Soil | Soil | Soil | Soil | Soil | Soil | Soil | Soil | Soil | Soil |
| Date Sampled | 6/24/2002 | 6/24/2002 | 6/24/2002 | 6/24/2002 | 6/24/2002 | 6/24/2002 | 6/24/2002 | 6/24/2002 | 6/24/2002 | 6/24/2002 | 6/24/2002 | 6/24/2002 |
| Time Sampled | 1345 | 1400 | 1415 | 1430 | 1445 | 1500 | 1515 | 1530 | 1300 | 1315 | 1325 | 1335 |
| | Units | RL | | | | | | | | | | |
| TCLP VOA 8260B | | | | | | | | | | | | |
| 1,1-Dichloroethene | ug/L | 5 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <25 | <20 |
| 1,2-Dichloroethane | ug/L | 5 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <25 | <20 |
| 2-Butanone | ug/L | 25 | <100 | <100 | <100 | <100 | <100 | <100 | 1500 | <100 | 3700 | <120 |
| Benzene | ug/L | 5 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <25 | <20 |
| Carbon tetrachloride | ug/L | 5 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <25 | <20 |
| Chlorobenzene | ug/L | 5 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <25 | <20 |
| Chloroform | ug/L | 5 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <25 | <20 |
| Tetrachloroethene | ug/L | 5 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <25 | 210 |
| Trichloroethene | ug/L | 5 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <25 | <20 |
| Vinyl chloride | ug/L | 5 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <25 | <20 |

0000004

| | | | | | | | | | | | | | |
|----------------------------|--|-----------|-----------|----------------|-----------|-----------|-----------|-----------|--------------------------------|-----------|-----------|-----------|-----------|
| Weston Solutions Inc. | | | | | | | | | ACE Technologies Inc. | | | | |
| 750 E Bunker Ct, Suite 500 | | | | | | | | | 1680 Lake Front Circle, Ste. B | | | | |
| Vernon Hills, IL 60061 | | | | | | | | | The Woodlands, TX 78130 | | | | |
| Tel: (847) 918-4094 | | | | | | | | | Phone: (281) 363-2233 | | | | |
| Fax: (847) 918-4055 | | | | | | | | | Fax : (281) 298-5784 | | | | |
| | | | | | | | | | Date: | 7/15/2002 | | | |
| Attn: Ms. Tonya Balla | | | | TCLP SVOA8270C | | | | | Project Name: IWI/ITASCO | | | | |
| | | | | | | | | | | | | | |
| Episode #: | | 8067 | | | | | | | | | | | |
| Lab Sample ID | | 001 | 002 | 003 | 004 | 005 | 006 | 007 | 008 | 009 | 010 | 011 | 12 |
| Client Sample I D | | IWI-5 | IWI-6 | IWI-7 | IWI-8 | IWI-9 | IWI-10 | IWI-11 | IWI-12 | IWI-1 | IWI-2 | IWI-3 | IWI-4 |
| | | | | | | | | | | | | | |
| Sample Matrix | | Soil | Soil | Soil | Soil | Soil | Soil | Soil | Soil | Soil | Soil | Soil | Soil |
| Date Sampled | | 6/24/2002 | 6/24/2002 | 6/24/2002 | 6/24/2002 | 6/24/2002 | 6/24/2002 | 6/24/2002 | 6/24/2002 | 6/24/2002 | 6/24/2002 | 6/24/2002 | 6/24/2002 |
| Time Sampled | | 1345 | 1400 | 1415 | 1430 | 1445 | 1500 | 1515 | 1530 | 1300 | 1315 | 1325 | 1335 |
| | | Units | RL | | | | | | | | | | |
| TCLP SVOA 8270C | | | | | | | | | | | | | |
| 1,4-Dichlorobenzene | | ug/L | 50 | <50 | <50 | <50 | <50 | <50 | <50 | <50 | <50 | <50 | <50 |
| 2,4,5-Trichlorophenol | | ug/L | 120 | <120 | <120 | <120 | <120 | <120 | <120 | <120 | <120 | <120 | <120 |
| 2,4,6-Trichlorophenol | | ug/L | 50 | <50 | <50 | <50 | <50 | <50 | <50 | <50 | <50 | <50 | <50 |
| 2,4-Dinitrotoluene | | ug/L | 50 | <50 | <50 | <50 | <50 | <50 | <50 | <50 | <50 | <50 | <50 |
| 2-Methylphenol | | ug/L | 50 | <50 | <50 | <50 | <50 | <50 | <50 | <50 | <50 | <50 | <50 |
| 3+4-Methylphenol | | ug/L | 50 | <50 | <50 | <50 | <50 | <50 | <50 | <50 | <50 | <50 | <50 |
| Hexachlorobenzene | | ug/L | 50 | <50 | <50 | <50 | <50 | <50 | <50 | <50 | <50 | <50 | <50 |
| Hexachlorobutadiene | | ug/L | 50 | <50 | <50 | <50 | <50 | <50 | <50 | <50 | <50 | <50 | <50 |
| Hexachloroethane | | ug/L | 50 | <50 | <50 | <50 | <50 | <50 | <50 | <50 | <50 | <50 | <50 |
| Nitrobenzene | | ug/L | 50 | <50 | <50 | <50 | <50 | <50 | <50 | <50 | <50 | <50 | <50 |
| Pentachlorophenol | | ug/L | 120 | <120 | <120 | <120 | <120 | <120 | <120 | 100 | <120 | <120 | <120 |
| Pyridine | | ug/L | 50 | <50 | <50 | <50 | <50 | <50 | <50 | <50 | <50 | <50 | <50 |

0000005

| | | | | | | | | | | | | | | | | |
|----------------------------|--|--|-------------------------------------|-----------|-----------|-----------|-----------|-----------|--------------------------------|-----------|-----------|-----------|-----------|-----------|--------|--------|
| Weston Solutions Inc. | | | | | | | | | ACE Technologies Inc. | | | | | | | |
| 750 E Bunker Ct, Suite 500 | | | | | | | | | 1680 Lake Front Circle, Ste. B | | | | | | | |
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| Fax: (847) 918-4055 | | | | | | | | | Fax : (281) 298-5784 | | | | | | | |
| | | | | | | | | | Date: 7/15/2002 | | | | | | | |
| Attn: Ms. Tonya Balla | | | Total TAL Metals & TCLP RCRA Metals | | | | | | Project Name: IWI/ITASCO | | | | | | | |
| Episode #: | | | 8067 | | | | | | | | | | | | | |
| Lab Sample ID | | | 001 | 002 | 003 | 004 | 005 | 006 | 007 | 008 | 009 | 010 | 011 | 12 | | |
| Client Sample ID | | | IWI-5 | IWI-6 | IWI-7 | IWI-8 | IWI-9 | IWI-10 | IWI-11 | IWI-12 | IWI-1 | IWI-2 | IWI-3 | IWI-4 | | |
| | | | | | | | | | | | | | | | | |
| Sample Matrix | | | Soil | Soil | Soil | Soil | Soil | Soil | Soil | Soil | Soil | Soil | Soil | Soil | | |
| Date Sampled | | | 6/24/2002 | 6/24/2002 | 6/24/2002 | 6/24/2002 | 6/24/2002 | 6/24/2002 | 6/24/2002 | 6/24/2002 | 6/24/2002 | 6/24/2002 | 6/24/2002 | 6/24/2002 | | |
| Time Sampled | | | 1345 | 1400 | 1415 | 1430 | 1445 | 1500 | 1515 | 1530 | 1300 | 1315 | 1325 | 1335 | | |
| | | | Units | RL | | | | | | | | | | | | |
| Total TAL Metals | | | | | | | | | | | | | | | | |
| Aluminum | | | mg/kg | 6.70 | 10000 | 74 | 20 | 24 | 1700 | 290 | 220 | 6.7 | 1800 | 330 | 52 | 3000 |
| Antimony | | | mg/kg | 4.0 | 110 | <4 | <4 | <4 | 24 | 5.4 | 31 | <4 | 74 | 68 | <3.9 | 2200 |
| Arsenic | | | mg/kg | 0.67 | 14.5 | <0.662 | <0.662 | <0.667 | 1.93 | 3.27 | <0.667 | <0.662 | 1.42 | 1.49 | <0.658 | 7.53 |
| Barium | | | mg/kg | 0.67 | 2100 | 17 | 3.3 | 18 | 370 | 110 | 490 | <0.66 | 720 | 650 | 100 | 1400 |
| Beryllium | | | mg/kg | 0.333 | <0.329 | <0.331 | <0.331 | <0.333 | .809 | <0.336 | <0.333 | <0.331 | 36.3 | <0.329 | <0.329 | <0.329 |
| Cadmium | | | mg/kg | 0.333 | 30.9 | <0.331 | <0.331 | <0.331 | 5.62 | 0.486 | 9.99 | <0.331 | .587 | 3.53 | 3.73 | 0.367 |
| Calcium | | | mg/kg | 67.0 | 14000 | 290 | 9400 | 180 | 3500 | 1200 | 6200 | 97 | 75 | 5900 | 210 | 5800 |
| Chromium | | | mg/kg | 0.67 | 500 | <0.66 | 0.78 | 1.8 | 290 | 9.6 | 29 | <0.66 | 14000 | 23 | 52 | 27 |
| Cobalt | | | mg/kg | 0.67 | 10 | <0.66 | <0.66 | <0.67 | 12 | 16 | 1.8 | <0.66 | <0.66 | 1.7 | 0.89 | <0.66 |
| Copper | | | mg/kg | 1.3 | 290 | 180 | 5.2 | 3.9 | 38 | 13 | 15 | 2.7 | 4 | 25 | 80 | 6.9 |
| Iron | | | mg/kg | 6.7 | 15000 | 200 | 140 | 160 | 2100 | 5700 | 380 | 7.4 | 350 | 1500 | 75 | 3300 |
| Lead | | | mg/kg | 0.667 | 1770 | 1.87 | 15900 | 29.1 | 4450 | 40.4 | 280 | 0.697 | 112 | 79.7 | 101 | 5860 |
| Magnesium | | | mg/kg | 67.0 | 3800 | <66 | 84 | 78 | 1500 | 460 | 190 | 1000 | <66 | 400 | <66 | 4700 |
| Manganese | | | mg/kg | 0.67 | 110 | 1.6 | 1.4 | 1.9 | 50 | 42 | 47 | <0.66 | 4.4 | 35 | 2.3 | 95 |
| Mercury | | | mg/kg | 0.03 | 0.71 | <0.03 | <0.03 | <0.03 | 0.06 | <0.03 | 0.03 | 0.03 | <0.03 | 0.03 | 0.17 | 0.03 |
| Nickel | | | mg/kg | 1.3 | 25 | <1.3 | <1.3 | <1.3 | 1.8 | <1.3 | 2.6 | <1.3 | <1.3 | <1.3 | <1.3 | 30 |
| Potassium | | | mg/kg | 67.0 | 800 | <66 | <66 | <67 | 160 | <67 | 110 | <66 | <66 | <66 | 950 | 100 |
| Selenium | | | mg/kg | 0.467 | 1.62 | 0.676 | 0.803 | 0.499 | 0.804 | 1 | 0.803 | 0.536 | <0.461 | 0.986 | 0.593 | 1.45 |
| Silver | | | mg/kg | 0.33 | 2.1 | <0.33 | <0.33 | <0.33 | 0.91 | <0.34 | <0.33 | <0.33 | 46 | <0.33 | <0.33 | <0.33 |
| Sodium | | | mg/kg | 67.0 | 3700 | 89 | 330 | 780 | 1300 | 210 | 1300 | 430 | <66 | 500 | 650 | 370 |
| Thallium | | | mg/kg | 0.333 | <0.329 | <0.331 | <0.331 | <0.333 | <0.329 | <0.336 | <0.333 | <0.331 | <0.329 | <0.329 | <0.329 | <0.329 |
| Vanadium | | | mg/kg | 0.67 | 3.7 | <0.66 | 1.1 | .83 | 1.6 | <0.67 | <0.67 | <0.66 | 15 | 0.99 | <0.66 | <0.66 |
| Zinc | | | mg/kg | 1.3 | 1600 | 4.9 | 8 | 1700 | 280 | 69 | 2000 | 18 | 140 | 340 | 130 | 800 |
| TCLP RCRA Metals | | | | | | | | | | | | | | | | |
| Arsenic | | | mg/L | 0.05 | <.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 |
| Barium | | | mg/L | 0.2 | 1.49 | 0.299 | <0.2 | <0.2 | 0.423 | 0.289 | 3.12 | <0.2 | 0.724 | 0.28 | <0.2 | 1.96 |
| Cadmium | | | mg/L | 0.05 | 0.085 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 |
| Chromium | | | mg/L | 0.1 | 0.278 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | 0.463 | <0.1 | 42.4 | <0.1 | <0.1 | <0.1 |
| Lead | | | mg/L | 0.05 | 4.64 | <0.05 | 281 | 0.313 | 4.95 | 0.085 | 0.072 | 0.173 | <0.05 | 0.094 | <0.05 | 7.18 |
| Mercury | | | mg/L | 0.001 | <.001 | <.001 | <.001 | <.001 | <.001 | <.001 | <.001 | <.001 | <.001 | <.001 | <.001 | <.001 |
| Selenium | | | mg/L | 0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 |
| Silver | | | mg/L | 0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |

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Attn: Ms. Tonya Balla

ACE Technologies Inc.

1680 Lake Front Circle, Ste. B

The Woodlands, TX 78130

Phone: (281) 363-2233

Fax : (281) 298-5784

Date: 7/15/2002

Project Name: IWI/ITASCO

RCI, pH & Paint Filter Test

Episode #: 8067

Lab Sample ID

001

002

003

004

005

006

007

008

009

010

011

12

Client Sample I D

IWI-5

IWI-6

IWI-7

IWI-8

IWI-9

IWI-10

IWI-11

IWI-12

IWI-1

IWI-2

IWI-3

IWI-4

Sample Matrix

Soil

Soil

Soil

Soil

Soil

Soil

Soil

Soil

Soil

Soil

Soil

Soil

Date Sampled

6/24/2002

6/24/2002

6/24/2002

6/24/2002

6/24/2002

6/24/2002

6/24/2002

6/24/2002

6/24/2002

6/24/2002

6/24/2002

6/24/2002

Time Sampled

1345

1400

1415

1430

1445

1500

1515

1530

1300

1315

1325

1335

Units RL/5g dry

Reactive Cyanide

mg/kg

1.0

<1.0

<1.0

<1.0

<1.0

<1.0

<1.0

<1.0

<1.0

<1.0

<1.0

<1.0

<1.0

Reactive Sulfide

mg/kg

1.0

385

302

169

152

445

390

298

485

242

259

212

261

Flash Point

Degrees F

90

105

95

100

155

90

75

120

85

90

85

90

pH

s.u.

5.47

4.96

5.52

10.7

6.63

5.55

5.55

5.5

6.28

4.5

8.8

5.94

Paint Filter Test

Pass/Fail

Pass

Fail

Pass

Pass

Pass

Pass

Pass

Pass

Pass

Fail

Fail

Fail

Pass

Note: Pass = No Free Liquid Present
Fail = Free Liquid Present

80000008

Weston Solutions Inc.**750 E Bunker Ct, Suite 500****Vernon Hills, IL 60061****Tel: (847) 918-4094****Fax: (847) 918-4055****Attn: Ms. Tonya Balla****VOA8260B & TCLP VOA8260B****ACE Technologies Inc.****1680 Lake Front Circle, Ste. B****The Woodlands, TX 78130****Phone: (281) 363-2233****Fax : (281) 298-5784****Date: 7/10/2002****Project Name: IWI/ITASCO****Episode #:****8054****Lab Sample ID****001****002****003****004****004DL1****004****Client Sample I D****IWI - 13****IWI - 13D****IWI - 14****IWI - 15****IWI - 15****IWI - 15****Sample Matrix****Soil****Soil****Soil****Soil****Soil****Soil****Date Sampled****6/24/2002****6/24/2002****6/24/2002****6/24/2002****6/24/2002****6/24/2002****Time Sampled****16:15****16:30****17:00****17:15****17:15****17:15****Percent Moisture****50.50****32.72****35.44****68.40****68.40****68.40****Units RL/5g dry****(Diluted Run) (Medium-Level****VOA 8260B****Analysis)****1,1,1,2-Tetrachloroethane****ug/kg****5.0****<14****<11****<11****<22****<130****<400****1,1,1-Trichloroethane****ug/kg****5.0****<14****<11****<11****<22****<130****<400****1,1,2,2-Tetrachloroethane****ug/kg****5.0****<14****<11****<11****<22****<130****<400****1,1,2-Trichloroethane****ug/kg****5.0****<14****<11****<11****<22****<130****<400****1,1-Dichloroethane****ug/kg****5.0****<14****<11****<11****<22****<130****<400****1,1-Dichloroethene****ug/kg****5.0****<14****<11****<11****<22****<130****<400****1,1-Dichloropropene****ug/kg****5.0****<14****<11****<11****<22****<130****<400****1,2,3-Trichlorobenzene****ug/kg****5.0****<14****<11****<11****<22****<130****<400****1,2,3-Trichloropropane****ug/kg****5.0****<14****<11****<11****<22****<130****<400****1,2,4-Trichlorobenzene****ug/kg****5.0****<14****<11****<11****<22****<130****<400****1,2,4-Trimethylbenzene****ug/kg****5.0****<14****<11****58****1900****<130****<400****1,2-Dibromo-3-chloropropane****ug/kg****5.0****<14****<11****<11****<22****<130****<400****1,2-Dibromoethane****ug/kg****5.0****<14****<11****<11****<22****<130****<400****1,2-Dichlorobenzene****ug/kg****5.0****<14****<11****<11****<22****<130****<400****1,2-Dichloroethane****ug/kg****5.0****<14****<11****<11****<22****<130****<400****1,2-Dichloropropane****ug/kg****5.0****<14****<11****<11****<22****<130****<400****1,3,5-Trimethylbenzene****ug/kg****5.0****<14****<11****35****1600****<130****<400****1,3-Dichlorobenzene****ug/kg****5.0****<14****<11****<11****<22****<130****<400****1,3-Dichloropropane****ug/kg****5.0****<14****<11****<11****<22****<130****<400****1,4-Dichlorobenzene****ug/kg****5.0****<14****<11****<11****<22****<130****<400****1-Chlorohexane****ug/kg****5.0****<14****<11****<11****<22****<130****<400****2,2-Dichloropropane****ug/kg****5.0****<14****<11****<11****<22****<130****<400****2-Butanone****ug/kg****25****<72****<57****<53****<110****<660****<790****2-Chloroethyl vinyl ether****ug/kg****5.0****<14****<11****<11****<22****<130****<400****2-Chlorotoluene****ug/kg****5.0****<14****<11****<11****<22****<130****<790****2-Hexanone****ug/kg****25****<72****<57****<53****<110****<660****<400****4-Chlorotoluene****ug/kg****5.0****<14****<11****<11****<22****<130****<790****4-Methyl-2-pentanone****ug/kg****25****<72****<57****<53****<110****<660****<790****Acetone****ug/kg****25****99****150****83****260****<660****<400**

0000002

[illegible]

[illegible]

Weston Solutions Inc.

750 E Bunker Ct, Suite 500

Vernon Hills, IL 60061

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Attn: Ms. Tonya Balla

SVOA8270C & TCLP SVOA8270C

ACE Technologies Inc.

1680 Lake Front Circle, Ste. B

The Woodlands, TX 78130

Phone: (281) 363-2233

Fax : (281) 298-5784

Date: 7/10/2002

Project Name: IWI/ITASCO

Episode #:

8054

Lab Sample ID

001

002

003

004

Client Sample ID

IWI - 13

IWI - 13D

IWI - 14

IWI - 15

Sample Matrix

Soil

Soil

Soil

Soil

Date Sampled

6/24/2002

6/24/2002

6/24/2002

6/24/2002

Time Sampled

16:15

16:30

17:00

17:15

Percent Moisture

50.50

32.72

35.44

68.40

| | Units | RL | | | | |
|--|-------|----|--|--|--|--|
|--|-------|----|--|--|--|--|

SVOA 8270C

| | | | | | | |
|-------------------------------|-------|-------|---------|---------|---------|---------|
| 1,2,4-Trichlorobenzene | ug/kg | 5000 | <100000 | <74000 | <77000 | <160000 |
| 1,2-Dichlorobenzene | ug/kg | 5000 | <100000 | <74000 | <77000 | <160000 |
| 1,3-Dichlorobenzene | ug/kg | 5000 | <100000 | <74000 | <77000 | <160000 |
| 1,4-Dichlorobenzene | ug/kg | 5000 | <100000 | <74000 | <77000 | <160000 |
| 2,2'-oxybis (1-Chloropropane) | ug/kg | 5000 | <100000 | <74000 | <77000 | <160000 |
| 2,4,5-Trichlorophenol | ug/kg | 12000 | <250000 | <190000 | <190000 | <400000 |
| 2,4,6-Trichlorophenol | ug/kg | 5000 | <100000 | <74000 | <77000 | <160000 |
| 2,4-Dichlorophenol | ug/kg | 5000 | <100000 | <74000 | <77000 | <160000 |
| 2,4-Dimethylphenol | ug/kg | 5000 | <100000 | <74000 | <77000 | <160000 |
| 2,4-Dinitrophenol | ug/kg | 12000 | <250000 | <190000 | <190000 | <400000 |
| 2,4-Dinitrotoluene | ug/kg | 5000 | <100000 | <74000 | <77000 | <160000 |
| 2,6-Dinitrotoluene | ug/kg | 5000 | <100000 | <74000 | <77000 | <160000 |
| 2-Chloronaphthalene | ug/kg | 5000 | <100000 | <74000 | <77000 | <160000 |
| 2-Chlorophenol | ug/kg | 5000 | <100000 | <74000 | <77000 | <160000 |
| 2-Methylnaphthalene | ug/kg | 5000 | <100000 | <74000 | <77000 | <160000 |
| 2-Methylphenol | ug/kg | 5000 | <100000 | <74000 | <77000 | <160000 |
| 2-Nitroaniline | ug/kg | 12000 | <250000 | <190000 | <190000 | <400000 |
| 2-Nitrophenol | ug/kg | 5000 | <100000 | <74000 | <77000 | <160000 |
| 3,3'-Dichlorobenzidine | ug/kg | 5000 | <100000 | <74000 | <77000 | <160000 |
| 3-Nitroaniline | ug/kg | 12000 | <250000 | <190000 | <190000 | <400000 |
| 4,6-Dinitro-2-methylphenol | ug/kg | 12000 | <250000 | <190000 | <190000 | <400000 |
| 4-Bromophenyl phenyl ether | ug/kg | 5000 | <100000 | <74000 | <77000 | <160000 |
| 4-Chloro-3-methylphenol | ug/kg | 5000 | <100000 | <74000 | <77000 | <160000 |
| 4-Chloroaniline | ug/kg | 5000 | <100000 | <74000 | <77000 | <160000 |
| 4-Chlorophenyl phenyl ether | ug/kg | 5000 | <100000 | <74000 | <77000 | <160000 |
| 4-Methylphenol | ug/kg | 5000 | <100000 | <74000 | <77000 | <160000 |
| 4-Nitroaniline | ug/kg | 12000 | <250000 | <190000 | <190000 | <400000 |
| 4-Nitrophenol | ug/kg | 12000 | <250000 | <190000 | <190000 | <400000 |
| Acenaphthene | ug/kg | 5000 | <100000 | <74000 | <77000 | <160000 |
| Acenaphthylene | ug/kg | 5000 | <100000 | <74000 | <77000 | <160000 |

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| | | | | | | | | | | | | | | | | | | | | |
|--------------------------|--------------|-----------|-----------------|------------------|-----------------|-----------------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| Episode #: | | | 8054 | | | | | | | | | | | | | | | | | |
| Lab Sample ID | | | 001 | 002 | 003 | 004 | | | | | | | | | | | | | | |
| Client Sample I D | | | IWI - 13 | IWI - 13D | IWI - 14 | IWI - 15 | | | | | | | | | | | | | | |
| Sample Matrix | | | Soil | Soil | Soil | Soil | | | | | | | | | | | | | | |
| Date Sampled | | | 6/24/2002 | 6/24/2002 | 6/24/2002 | 6/24/2002 | | | | | | | | | | | | | | |
| Time Sampled | | | 16:15 | 16:30 | 17:00 | 17:15 | | | | | | | | | | | | | | |
| | Units | RL | | | | | | | | | | | | | | | | | | |
| TCLP SVOA 8270C | | | | | | | | | | | | | | | | | | | | |
| 1,4-Dichlorobenzene | ug/L | 50 | <50 | <50 | <50 | <50 | | | | | | | | | | | | | | |
| 2,4,5-Trichlorophenol | ug/L | 120 | <120 | <120 | <120 | <120 | | | | | | | | | | | | | | |
| 2,4,6-Trichlorophenol | ug/L | 50 | <50 | <50 | <50 | <50 | | | | | | | | | | | | | | |
| 2,4-Dinitrotoluene | ug/L | 50 | <50 | <50 | <50 | <50 | | | | | | | | | | | | | | |
| 2-Methylphenol | ug/L | 50 | <50 | <50 | <50 | <50 | | | | | | | | | | | | | | |
| 3+4-Methylphenol | ug/L | 50 | <50 | <50 | <50 | <50 | | | | | | | | | | | | | | |
| Hexachlorobenzene | ug/L | 50 | <50 | <50 | <50 | <50 | | | | | | | | | | | | | | |
| Hexachlorobutadiene | ug/L | 50 | <50 | <50 | <50 | <50 | | | | | | | | | | | | | | |
| Hexachloroethane | ug/L | 50 | <50 | <50 | <50 | <50 | | | | | | | | | | | | | | |
| Nitrobenzene | ug/L | 50 | <50 | <50 | <50 | <50 | | | | | | | | | | | | | | |
| Pentachlorophenol | ug/L | 120 | <120 | <120 | <120 | <120 | | | | | | | | | | | | | | |
| Pyridine | ug/L | 50 | <50 | <50 | <50 | <50 | | | | | | | | | | | | | | |

7000000

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Attn: Ms. Tonya Balla

Pesticides and PCB's

Episode #:

8054

Lab Sample ID

001

002

003

004

Client Sample ID

IWI - 13

IWI - 13D

IWI - 14

IWI - 15

Sample Matrix

Soil

Soil

Soil

Soil

Date Sampled

6/24/2002

6/24/2002

6/24/2002

6/24/2002

Time Sampled

16:15

16:30

17:00

17:15

Percent Moisture

50.50

32.72

35.44

68.40

Units

RL

Pesticides

| | | | | | | |
|----------------------|-------|-------|-------|------|------|-------|
| 4,4'-DDD | ug/kg | 50.0 | <100 | <74 | <77 | <160 |
| 4,4'-DDE | ug/kg | 50.0 | <100 | <74 | <77 | <160 |
| 4,4'-DDT | ug/kg | 50.0 | <100 | <74 | <77 | <160 |
| Aldrin | ug/kg | 25.0 | <51 | <37 | <39 | <79 |
| alpha-BHC | ug/kg | 25.0 | <51 | <37 | <39 | <79 |
| beta-BHC | ug/kg | 25.0 | <51 | <37 | <39 | <79 |
| Chlordane(Technical) | ug/kg | 50.0 | <100 | <74 | <77 | <160 |
| delta-BHC | ug/kg | 25.0 | <51 | <37 | <39 | <79 |
| Dieldrin | ug/kg | 50.0 | <100 | <74 | <77 | <160 |
| Endosulfan II | ug/kg | 50.0 | <100 | <74 | <77 | <160 |
| Endosulfon Sulfate | ug/kg | 50.0 | <100 | <74 | <77 | <160 |
| Endosulfon -1 | ug/kg | 25.0 | <51 | <37 | <39 | <79 |
| Endrin | ug/kg | 50.0 | <100 | <74 | <77 | <160 |
| Endrin Aldehyde | ug/kg | 50.0 | <100 | <74 | <77 | <160 |
| Endrin Ketone | ug/kg | 50.0 | <100 | <74 | <77 | <160 |
| gamma-BHC | ug/kg | 25.0 | <51 | <37 | <39 | <79 |
| Heptachlor | ug/kg | 25.0 | <51 | <37 | <39 | <79 |
| Heptachlor Epoxide | ug/kg | 25.0 | <51 | <37 | <39 | <79 |
| Methoxychlor | ug/kg | 250.0 | <510 | <370 | <390 | <790 |
| Toxaphene | ug/kg | 500.0 | <1000 | <740 | <770 | <1600 |

PCB's

| | | | | | | |
|--------------|-------|-------|-------|------|------|-------|
| Aroclor 1016 | ug/kg | 500.0 | <1000 | <740 | <770 | <1600 |
| Aroclor 1221 | ug/kg | 500.0 | <1000 | <740 | <770 | <1600 |
| Aroclor 1232 | ug/kg | 500.0 | <1000 | <740 | <770 | <1600 |
| Aroclor 1242 | ug/kg | 500.0 | <1000 | <740 | <770 | <1600 |
| Aroclor 1248 | ug/kg | 500.0 | <1000 | <740 | <770 | <1600 |
| Aroclor 1254 | ug/kg | 500.0 | <1000 | <740 | <770 | <1600 |
| Aroclor 1260 | ug/kg | 500.0 | <1000 | <740 | <770 | <1600 |

ACE Technologies Inc.

1680 Lake Front Circle, Ste. B

The Woodlands, TX 78130

Phone: (281) 363-2233

Fax : (281) 298-5784

Date: 7/10/2002

Project Name: IWI/ITASCO

8000000

| | | | | | | | | | | | |
|----------------------------|---------|-------|-------------------------------------|-----------|----------|----------|--|--------------------------------|--|--|--|
| Weston Solutions Inc. | | | | | | | | ACE Technologies Inc. | | | |
| 750 E Bunker Ct, Suite 500 | | | | | | | | 1680 Lake Front Circle, Ste. B | | | |
| Vernon Hills, IL 60061 | | | | | | | | The Woodlands, TX 78130 | | | |
| Tel: (847) 918-4094 | | | | | | | | Phone: (281) 363-2233 | | | |
| Fax: (847) 918-4055 | | | | | | | | Fax : (281) 298-5784 | | | |
| | | | | | | | | Date: 7/10/02 | | | |
| Attn: Ms. Tonya Balla | | | Total TAL Metals & TCLP RCRA Metals | | | | | Project Name: IWI/ITASCO | | | |
| Episode #: | | | 8054 | | | | | | | | |
| Lab Sample ID | | | 001 | 002 | 003 | 004 | | | | | |
| Client Sample I D | | | IWI - 13 | IWI - 13D | IWI - 14 | IWI - 15 | | | | | |
| Sample Matrix | | | Soil | Soil | Soil | Soil | | | | | |
| Date Sampled | | | 6/24/02 | 6/24/02 | 6/24/02 | 6/24/02 | | | | | |
| Time Sampled | | | 16:15 | 16:30 | 17:00 | 17:15 | | | | | |
| Percent Moisture | | | 50.50 | 32.72 | 35.44 | 68.40 | | | | | |
| | Units | RL'S | | | | | | | | | |
| Total TAL Metals | | | | | | | | | | | |
| Aluminum | rr g/kg | 6.70 | 3800 | 3400 | 6200 | 12000 | | | | | |
| Antimony | rr g/kg | 4.0 | 59 | 26 | 44 | 18 | | | | | |
| Arsenic | rr g/kg | 0.67 | 29.5 | 15.6 | 12.2 | 37.2 | | | | | |
| Barium | rr g/kg | 0.67 | 1600 | 980 | 11000 | 1300 | | | | | |
| Beryllium | rr g/kg | 0.333 | 1.94 | <0.492 | 1.3 | <1.04 | | | | | |
| Cadmium | rr g/kg | 0.333 | 14.7 | 12.6 | 26.2 | 17.6 | | | | | |
| Calcium | mg/kg | 67.0 | 28000 | 22000 | 21000 | 58000 | | | | | |
| Chromium | mg/kg | 0.67 | 820 | 170 | 400 | 48 | | | | | |
| Cobalt | mg/kg | 0.67 | 15 | 10 | 5.7 | 14 | | | | | |
| Copper | mg/kg | 1.3 | 180 | 52 | 61 | 150 | | | | | |
| Iron | mg/kg | 6.7 | 38000 | 20000 | 8700 | 27000 | | | | | |
| Lead | mg/kg | 0.667 | 4240 | 2840 | 1850 | 1870 | | | | | |
| Magnesium | mg/kg | 67.0 | 11000 | 8400 | 6300 | 24000 | | | | | |
| Manganese | mg/kg | 0.67 | 770 | 530 | 260 | 340 | | | | | |
| Mercury | mg/kg | 0.03 | 0.06 | 0.05 | 0.12 | 0.04 | | | | | |
| Nickel | mg/kg | 1.3 | 6.2 | 8.7 | 7.9 | 61 | | | | | |
| Potassim | mg/kg | 67.0 | 380 | 300 | 380 | 1300 | | | | | |
| Selenium | mg/kg | 0.467 | 4.59 | 3.12 | 1.39 | 5.24 | | | | | |
| Silver | mg/kg | 0.33 | 2.2 | <0.49 | 1.4 | <1.0 | | | | | |
| Sodium | mg/kg | 67.0 | 1300 | 950 | 1200 | 2100 | | | | | |
| Thalium | mg/kg | 0.333 | <0.673 | <0.492 | <0.513 | <1.04 | | | | | |
| Vanadium | mg/kg | 0.67 | 9 | 7.9 | 8 | 79 | | | | | |
| Zinc | mg/kg | 1.3 | 1100 | 660 | 1200 | 2500 | | | | | |
| TCLP RCRA Metals | | | | | | | | | | | |
| Arsenic | mg/L | 0.05 | <0.05 | <0.05 | <0.05 | <0.05 | | | | | |
| Barium | mg/L | 0.2 | 2.58 | 3.36 | 36.4 | 2.16 | | | | | |
| Cadmium | mg/L | 0.05 | <0.05 | <0.05 | 0.274 | 0.074 | | | | | |
| Chromium | mg/L | 0.1 | <0.1 | <0.1 | 0.228 | <0.1 | | | | | |
| Lead | mg/L | 0.05 | 2.63 | 4.06 | 12.7 | 3.31 | | | | | |
| Mercury | mg/L | 0.001 | <0.001 | <0.001 | <0.001 | <0.001 | | | | | |
| Selenium | mg/L | 0.05 | <0.05 | 0.062 | <0.05 | <0.05 | | | | | |
| Silver | mg/L | 0.1 | <0.1 | <0.1 | <0.1 | <0.1 | | | | | |

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